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ABSTRACT

A study examined second language article acquisition by analyzing the spoken interlanguage of speakers of five different native languages, three with no article system (Chinese, Japanese, and Russian) and two with article systems (Spanish and German). Informal interviews of four speakers of each language at successive levels of interlanguage provided data for a pseudolongitudinal analysis of article usage for each of the five languages represented. The interlanguage level was determined primarily by negation criteria. Findings show that subjects whose first languages contained article systems differed markedly in English article acquisition from those whose first languages did not contain such a system, indicating that English article usage, particularly at the beginning levels, is clearly influenced by the first language. The most dramatic change in article usage appears to occur between the basilang and low mesolang levels for "the" and zero usage. "A" appears to be acquired at a slower and more gradual rate, perhaps reflecting its linkage to the plus-or-minus count system. (Author/MSE)

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Acquiring the English Article System: A Cross-Linguistic Interlanguage Analysis

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Abstract

This study provides a picture of second language article acquisition by analyzing the spoken English interlanguage of speakers of five different native languages, three with no article system (Chinese, Japanese, and Russian) and two with article systems (Spanish and German). Informal interviews of four speakers of each language at successive interlanguage levels provide the basis for a pseudolongitudinal analysis of article usage for each of the five languages represented. The interlanguage level is primarily determined by the negation criteria described by Cancino et al. (1978). Analysis revealed that subjects whose first languages contained an article system differed markedly in English article acquisition from those whose first languages did not contain such a system, showing that English article usage, especially at the beginning levels, is clearly influenced by the first language. The most dramatic change in article usage appears to occur between the basilang and low mesolang levels for the and Ø usage. A appears to be acquired at a slower and more gradual rate, perhaps reflecting its linkage to the [±count] system.

The articles a and the constitute two of the most frequently used words in the English language. For this reason, the article system, which also includes the problematic Ø article, is of interest to second language researchers because relatively little language data is required to provide a realistic assessment of a speakers control of the system. The present study provides a cross-linguistic view of the acquisition of this system, and the results are used to paint a generalized picture of the acquisition process.

Second Language Article Acquisition Studies

Dulay, Burt and Hernandez (1973) devised the Bilingual Syntax Measure to ascertain whether a morpheme acquisition sequence could be identified for children learning a second language that would parallel the findings of Brown (1973), de Villiers and de Villier (1973), and others for first language article acquisition. Using Brown's (1973) system of combining a(n) and the but not Ø under the general category "Article", Dulay and Burt (1974a) found (in the "Sacramento" group, the largest subgroup) that the mean correct article score was the fifth highest of eight functors (see Figure 1 below). Bailey, Madden and Krashen (1974) found similar results for adult ESL learners. For Spanish speakers, the article score was the highest of eight functors; for non-Spanish speakers, including Japanese, it was the sixth of eight functors. Both Dulay and Burt (1974a) and Bailey, Madden and Krashen (1974) found the majority of errors made by their subjects to be developmental rather than interference errors, i.e., interference from the first language was not the primary source of error. Bertkau (1974), in her analysis of article usage by Spanish and Japanese ESL students, found that variants attributable to native language interference did not appear consistently but were more likely to be the product of simplification in the process of language learning (e.g., the use of Ø in place of a(n) or the).

Hakuta (1976), in his longitudinal study of a Japanese child learning English, found the articles (once again, a(n) and the, but not Ø) at the 90% criterion level set by Brown to be thirteenth out of 17 morphemes (see ranking out of eight morphemes in Fig. 1 below). The child's early article usage Hakuta described as "simply fragments retained in her speech due to the

salience and frequency of articles" and that it was not until much later that his subject had "full control of the semantics of the articles" (pp. 340-341).

Figure 1 shows the article ranking in several studies. The eight functors common to all

[Fig. 1 here]

studies are 1) progressive, 2) plural, 3) irregular past, 4) possessive, 5) third person singular, 6) contracted copula, 7) contracted auxiliary, and 8) articles. Contrary to the claims in most of these studies that the rankings overall correlate quite closely with other studies, the correlation is not at all obvious when seen from the point of view of the article. Furthermore, despite claims that first language interference is not a significant factor, the figure shows that for the two studies with Japanese subjects (Hakuta and Bailey et al. [non- Spanish]), the ranking is much higher, i.e., later acquired. This would appear to indicate that first language is indeed a factor, at least in article acquisition.

Larsen-Freeman (1978) looked back at the earlier morpheme acquisition studies and found that "morpheme frequency of occurrence in native-speaker speech is the principle determinant for the oral production morpheme accuracy order of ESL learners" (1978:378-79). She suggested, in other words, that frequency of input determines morpheme acquisition order. However, given the inordinately high occurrence of the article in English speech, (e.g., Brown (1973) found the article to occur 552 times among the three sets of parents of his subjects whereas the regular past tense, for example, occurred only 44 times), one would expect, if Larsen-Freeman's claim is correct, greater article accuracy (or at least use) in beginning level learners than appears to be the case.

Andersen (1977) challenged the claim of earlier research that the majority of ESL errors are developmental rather than interference errors. Furthermore, he did this with data concerning the article. First of all, he separated a(n) from the and is the first to do so according to Hatch (1978b:43). Secondly, he considered the Ø article as a full article, again a first. One of Andersen's several innovations was to plot the use of the two forms of Ø by Spanish learners of ESL, $Ø_1$ representing the use of Ø in English where Spanish requires the, $Ø_2$ representing the use

of Ø in English where Spanish also requires Ø. From his data, Andersen was able to conclude that subjects perform well when the articles are the same in each language (i.e., $Ø_2$) but not nearly so well when the articles are different in the two languages (i.e., $Ø_1$). Furthermore, Andersen described the need to go beyond the notion of correct use of a morpheme in obligatory contexts to include the usage of morphemes when they are not required.

Huebner (1979) set forth Bickerton's (1975) notion of "dynamic paradigm", which seeks to describe exactly what learners do in their developing interlanguage systems rather than how closely they approximate the target. The same approach was suggested by Andersen (1977).

The work of Bailey (1973), Bickerton (1975) and Huebner (1983a) provides the core of the classification system that is used in this study. Huebner's subject, Ge, moved through six stages in his use of da. "Through these changing hypotheses about the function of da or changing trajectories in the use of da, Ge arrives at a function comparable to that of SE the" (p. 146). Huebner points out the use of zero anaphora (the zero article) in environments where the existence of the referent is assumed known to the hearer, and he also hypothesizes the learner strategies of "flooding" and "trickling." Flooding is used when a linguistic form is generalized to all environments, presumably because of the form's salience or the speaker's lack of knowledge of specific rules. Trickling is the general reduction in the use of forms when a hypothesis is found to be untenable.

Kellerman (1984) analyzed the acquisition of certain structures by Dutch learners of English and German. He found that acquisition appeared to take a U-shaped trajectory in these cases. Such a trajectory is characterized by three stages: 1) target-like performance in some limited linguistic domain, 2) performance which deviates from the target, and 3) a return to target-like performance. Kellerman concluded that cross-linguistic influence plays a critical role in the manifestation of U-shaped behavior. Bowerman (1982) had earlier found similar behavior in the first language acquisition of causative and "reversative" verbs.

The Development of the Negation Criteria

Cancino, Rosansky, and Schumann (1978) established the negation criteria for interlanguage level. Three generalized levels were identified and named basilang, mesolang, and acrolang to parallel the levels of basilect, mesolect, and acrolect that occur in pidgin development. These interlanguage stages are used in the present study to identify appropriate subject level in approximating a longitudinal study. Stauble (1977) expanded on the Cancino et al. (1978) negation analysis and delineated the negation characteristics exhibited at each stage of development by two native Spanish speakers over a 10-month period. Stauble (1981) compared the negation characteristics exhibited by six native Japanese speakers to those she found for Spanish speakers. She concluded that "a second language learner's negation characteristics can be employed as a gross measure of his verb phrase morphology development" (p. 351).

Studies Concerning the Acquisition/Learning of the English Article System

Neuman (1977) analyzed the composition errors of 158 intermediate-level learners and found the greatest number (22%) to be with the article system. She also found Japanese and Korean students to have more article omission errors than other learners. Negation errors, for example, accounted for only 0.5% of the errors found.

Yamada and Matsuura (1982) investigated article usage in Japanese students. Although they looked for target-like usage rather than a nontarget interlanguage system, the study is an improvement on earlier work in that 1) the article is broken down into separate tallies for a(n), the, and Ø and 2) the full range of article usage, rather than only the usage at the 90%+ accuracy level established by Brown (1973), is considered. In general, Yamada and Matsuura found that the overall difficulty order for intermediate level Japanese ESL students, from easiest to hardest, was the > a(n) > Ø, whereas the difficulty order for advanced level Japanese ESL students was the > Ø > a(n). They attributed most of the general difficulty to the specific/nonspecific distinction, which does not occur in Japanese and would therefore count as an interference error. In accounting for the fact that advanced learners continue to make article errors about 30% of the

time in written English, the researchers claim that "the articles had not received their (i.e., the students') attention," which shows the need for a pedagogical presentation of the article system.

Lamotte, Pearson-Joseph, and Zupko (1982) challenge the Cancino et al. (1978) negation criteria later delineated by Stauble (1977 and 1981) as an effective interlanguage measure. Using the TLU (target-like utterance) measure devised by Stauble (1981) to take into account the use of a morpheme outside its obligatory context, Lamotte et al. investigated the use of a(n) and the by Spanish, Japanese, and Vietnamese subjects who were identified as to interlanguage level by the Cancino et al. negation criteria. They found a "smooth progression" (i.e., continuous increase) in the use of the articles for the Spanish subjects, but not for the Japanese and Vietnamese ones, who evinced "variations within stages, across stages and across languages" (p. 8). This led them to conclude that the negation criteria may work for Spanish speakers but "may not be the most accurate representation of second language acquisition for all language groups" (p. 8).

Since the identification of the interlanguage level of the subjects in the present study is dependent on the negation criteria proposed by Cancino et al. (1978), Lamotte et al. (1982) is a direct challenge to the methodology on which the present investigation is based. However, three factors employed by Lamotte et al. have led me to discount their rejection of the negation criteria as an effective measure: 1) they do not consider the use of the zero article, 2) they include the use of articles with proper names, and 3) their rejection is based on the fact that the TLU score does not increase consistently across interlanguage levels. The zero article has already been described as an essential element of article usage, but Lamotte et al. avoid it because "with more advanced speakers, it is impossible to distinguish between informed, target-like use of [the] zero-article and non-systematic or arbitrary non-uses of any article which turn[s] out to be correct" (p. 4). In spite of this accurate characterization of the zero article, its "use", in my opinion, cannot be ignored. Secondly, proper nouns should not be included in an analysis of article usage because learning the arbitrary rules that apply may be a function of individual experience. Finally, the TLU measure has certain problems but the expectation of a "smooth progression" in article

hypothesis. For these reasons, the methodological basis of the present study was not changed.

Parish, Tarone, and Taghavi (1986) investigated the effect of task on the production of certain morphemes, including the article. In the three tasks investigated (a grammar test, free conversation, and an oral narrative), the morpheme production accuracy varied. A criticism of an earlier paper (Tarone 1985) given at the Los Angeles Second Language Research Forum (SLRF) was that the article should not be considered a single morpheme a la Brown (1973), Dulay and Burt (1974), and others, especially as article usage in Tarone (1985) showed a different pattern than the other morphemes studied. Parish, Tarone, and Taghavi (1986) then retroactively applied Huebner's "semantic wheel for article usage" (1983b) to Tarone's (1985) data but continued to link production to target accuracy, thus going against the spirit of Bickerton's dynamic paradigm. In the present study, the data are looked at both in terms of dynamic paradigm and, separately, in terms of accuracy vis-a-vis the target. The task in all cases is the participation in an informal interview. The findings of Parish et al. (1986) suggest that an oral narrative (i.e., giving and following instructions) would provide the highest accuracy, but since such data are not available for the present study, the informal interview (corresponding to Tarone's "free conversation" task) will have to suffice. However, since the task is the same for all 20 subjects in this study, the relative characteristics of article usage among the subjects should not be affected.

Acquisition of the article system by learners of English as a second language has not been studied in the degree of detail proposed in the present study, nor with such a wide cross-linguistic scope. What the study gains in breadth of outlook, however, it loses in statistical significance and hence generalizability. For this reason, the study should be seen as providing an overall picture of article acquisition that allows some speculation as to tendencies and apparent strategies but which cannot make concrete claims. The ability to make such claims requires a reduplication of the study using not one but 5-10 subjects for each cell, i.e., 100-200 subjects. It is hoped that such a reduplication will one day be undertaken.

METHODS

A true picture of article acquisition should be based on longitudinal studies like that of Huebner (1983b), which analyzes the English acquisition of a Hmong speaker. The longitudinal approach is approximated in the present study by using four speakers of the same native language at four different stages of English interlanguage development. Cancino, Rosansky, and Schumann's (1978) negation criteria are used to identify subjects at the appropriate level.

The English interlanguage of a basilang (BA) speaker, a low-mesolang (LM) speaker, a mid-mesolang (MM) speaker, and a high-mesolang (HM) speaker of each language are analyzed for article usage, resulting in the generation of 20 cells (4 stages X 5 languages) to represent five pseudolongitudinal pictures of article acquisition. The native languages of the subjects selected for analysis are three that do not have an article system (Chinese, Japanese, and Russian) and two that do (Spanish and German). In this study, the former subjects are referred to as the [-ART] group, the latter as the [+ART] group.

This investigation of the acquisition of the English article system is based on two hypotheses. The first looks at article aquisition in terms of its correctness or approximation to the target; the second views article acquisition in terms of learner usage, that is, without regard to accuracy or target. The morpheme acquisition studies of the 1970's were based entirely on the former approach. Morphemes were considered acquired after a certain threshold of accuracy had been crossed, usually 90% (Brown, 1973). But as Andersen (1977) pointed out, the consideration of morphemes only above a certain threshold ignored a sizeable quantity-- indeed, the bulk-- of useful data. For this reason, in the present study no absolute "threshold of acquisition" is postulated. Instead, development in terms of accuracy is considered across all interlanguage levels.

Hypothesis I: The pattern of accuracy in the use of the English article system reflects overall linguistic competence.

Bickerton (1975), Andersen (1977), and Huebner (1979) challenged morpheme studies that were based entirely on accuracy. They argued that this view ignored the actual strategies that

a nonnative speaker employed in acquiring syntax, among other aspects, in a second language. Huebner's (1983b) longitudinal analysis of a Hmong speaker describes what learners do in their developing interlanguage sytems. This forms the basis of the second hypothesis of this study.

- Hypothesis II: The use of the English article system reflects certain strategies of interlanguage development.

The data for this study of twenty nonnative speakers of English are taken from tape-recorded informal interviews that were conducted between 1980 and 1986. The majority (15/20) of the interviews were conducted by students from John Schumann's "Contrastive Analysis" classes (English 241K) at UCLA during the years mentioned above. The remaining five interviews were conducted by myself.

Students in the Contrastive Analysis class are required to record an informal interview with a nonnative speaker of English, to transcribe the interview, and then to perform an interlanguage analysis of the data. This consists of making a list of "pulled utterances" reflecting the use of different morphemes, primarily those concerned with verb phrase morphology. One of the most important aspects of this process is the determination of the subject's use of negation. Cancino, et al. (1978) established that interlanguage level could be ascertained by verbal negation structures in the following pattern:

1. Basilang: predominance of no or not + verb
2. Low Mesolang: predominance of unanalyzed don't + verb
3. Mid-Mesolang: predominance of auxiliary + negation + verb
4. High Mesolang: predominance of analyzed don't + verb

Each of the subject's interviews was analyzed by the original interviewer in terms of negation as well as certain aspects of noun phrase morphology, namely plural and possessive markers, but not for article use. A prediction was then made as to the subject's interlanguage (IL) level.

Selection of Subjects

In selecting subjects for the present study, I looked at each subject's negation

characteristics, the interviewer's stated IL level, and the subject's morpheme acquisition at the 20%, 50%, and 70% accuracy levels in order to make sure that I had subjects with the desired native language who were at the appropriate IL level. In all cases, the predominance of negation form (Table 1) was the strongest criterion for selection, as morpheme acquisition at various

[Tbl.1 here]

percentages of accuracy is at best an approximate indication of IL level. As a result of this process, 20 subjects were selected. Table 2 provides background information on each of the

[Tbl. 2 here]

subjects. In the group as a whole, there are nine males and eleven females. The age range is 13 - 93 years. The length of time in the U.S. ranges from three weeks to 32 years. The level of education ranges from elementary to university. The subjects in each of the five language groups share the same first language, a dialect thereof, or a genetically-related language. Thus the Chinese group includes speakers of both Mandarin and Cantonese; the German group includes speakers of both Standard German and Swiss German; the Spanish group includes speakers from Central and South America. The one exception is the basilang representative of the Russian group. Her first language is not Russian but Polish. However, the two languages are both of Slavic origin, and neither has an article system. Furthermore, I used Kinga (the Polish speaker) in a pilot study that included Russian speakers (Master 1985) and found her not to diverge in any significant way from Russian speakers in her use of the article system.

The Interviews

The interviews are informal in so far as they are simply elicitations of the subject's speech without any preplanned questions. As most of the subjects are immigrants to the United States, the topics discussed commonly concerned why the subject came to the U.S., what life was like in the native country, what the subject's occupation was, what the subject felt about the U.S., what the subject planned to do in the future, or recountings of stories or film plots. The interviews average 60 minutes in length, with a range of 40 to 75 minutes.

Transcriptions

The interviews were all transcribed by the original interviewer. However, the assignment did not require an analysis of article usage. Since the article is generally an unstressed morpheme in English, I could not be sure that the interviewer had correctly transcribed all instances of article usage. For this reason, I obtained a copy of the original tape recording of each interview and listened to it carefully while following the transcript, making any corrections necessary. For the most part, the transcriptions were quite accurate, although it was apparent from this phase of the study that transcriptions in general should be as detailed as possible (i.e., including every repetition, false start, "um", etc.) in order to catch unstressed morphological or syntactic features.

Pulled Utterances

Once the transcript had been double checked against the original tape-recorded interview, a list of pulled utterances was created for each subject. Each entry indicated the number of the utterance, the page and line number from where it came in the transcript, the noun phrase being considered plus minimal attendant context to justify its classification, the article used, the article required, and the classification code. An example from the MM German subject illustrates the format.

[Fig. 2 here]

In some cases, especially at the basilang (BA) and low mesolang (LM) levels, a decision had to be made from context as to whether the speaker had used an epenthetic vowel (e.g., have pronounced as /haevə/) instead of the indefinite article. This decision was based on the occurrence, if any, of epenthetic vowels in other structures in the same way that Huebner (1983b) counted isa as a single morpheme. Similarly, context was used to decide whether the speaker had really used the Ø article or had simply neglected to add the final -s morpheme. For example, the Chinese BA speaker Ah Chun uttered the sentence "Do cabbagee" [= we had to plant cabbage(s)]. Cabbage can

be either a [+count] or a [-count] noun and the classification system used in this study requires the distinction of the two. In this case, I reasoned that the [-count] form cabbage would be more appropriate for cooking or harvesting, but that for planting, the [+count] form cabbages is probably more appropriate. Since Ah Chun never uses the plural -s form, I counted "cabbagee" in her transcript as Ø + cabbage + deleted -s, i.e., a correct use of the Ø article. Whenever such decisions were made based on context, the pulled utterance was flagged with a question mark. The number of question marks is highest for the basilang speakers and diminishes to zero by the mid-mesolang level. Even so, question marks in Ah Chun's pulled utterances account for only 2.6% (8/389) of the total.

Classification Codes

The classification codes used in this study utilize Bickerton's "semantic wheel for noun phrase reference" as cited by Huebner (1983a). This paradigm divides the article system into four major categories, as shown in Figure 3, which are based on the features [±HK], known to the hearer, and [±SR], specific referent. These categories are a considerable improvement

[Fig. 3 here]

on Brown (1973) and the later SLA morpheme studies, which consider the and a as a single morpheme and do not count Ø as an article.

The Tally

In order to facilitate both the speed and accuracy of the final count, a data file was created on an Apple II Plus computer using a data management program called Datadex (Information Unlimited Software). The data from the lists of pulled utterances, specifically the number of the noun phrase, the article used, the article required, and the classification code, were entered into the program. This second entry phase allowed a double check of the original classification made on the pulled utterance lists for each subject. It also allowed a reconsideration of the noun phrases marked with a question mark, which in a few cases lead to a reclassification of that noun phrase.

When the data for a subject had been entered and checked by means of an accumulator function, which confirmed that the supposed number of noun phrases had been entered, various data sorts were performed, allowing the production of data tables from which graphs could be constructed. Due to the presence of both the article used (including the words one, this, and that, which some subjects occasionally substituted for an article) and the article required in each entry, the data could be tallied in terms of both accuracy (article used equals/does not equal article required) and usage (article required ignored) and the appropriate data tables assembled. For the indefinite articles, both a and an were counted as correct, even if a was incorrectly used before a vowel sound (e.g., a apple). This decision was made because I am interested in the selection of a over Ø and the and not whether the speaker has learned the phonetic requirement of using an before a vowel sound. However, one or ein in place of a was counted as an incorrect usage. Similarly, de, ze, der, and die (der and die because they sound so similar to English the in rapid speech) were counted as correct forms of the definite article, whereas that and this were counted as incorrect.

My original intention was to investigate the articles with proper nouns. After a thorough analysis, however, I found that there seemed to be no clear pattern of acquisition short of a generalized tendency to improved accuracy with increasing interlanguage level and that a subject's knowledge and usage of the somewhat idiosyncratic rules for articles with proper nouns tended to depend on his or her experience in the world. Thus, the houseworkers, for example, knew and used street names, the travelers knew and used the names of rivers and mountains, and the students knew and used the names of languages. However, not every subject used every type of proper noun, and the N for some types of proper nouns was quite low. For this reason, like Huebner (1983b), I decided to confine my investigation to the use of articles with common nouns.

RESULTS

The data were analyzed in light of the two hypotheses set forth in the methods section. Hypothesis I concerns accuracy or degree of approximation to the target. Hypothesis II concerns

usage or a description of the speaker's evolving interlanguage without regard to target.

ACCURACY

Accuracy in this study is based on the standard notion of supplied in obligatory context, SOC. SOC indicates the number of correct items divided by the number of environments or obligatory contexts in which the article should be used. Since I was interested in patterns of English article acquisition by speakers of different native languages, the data are first presented as graphs of article accuracy by the four speakers of each of the five language groups.

Article Accuracy (SOC) for Each Language Group

Article accuracy (SOC) for each language group is shown in Figure 4. The [-ART]

[Fig. 4 here]

languages (Chinese, Japanese, and Russian) are at the top, the [+ART] languages (Spanish and German) at the bottom. The double line indicates the accuracy of the three articles combined. A comparison of the [-ART] graphs shows them to have four elements in common:

1) Ø is the most accurate, starting near the 100% accuracy level for all three [-ART] BA subjects. There is a slight drop in accuracy at the LM stage for the Chinese subject, at the MM stage for the Russian subject. The Japanese LM subject shows the most marked decrease in Ø accuracy, which is partially a product of her overuse of <u>the</u> (<u>the</u>-"flooding", to use Huebner's 1983a term) at the expense of Ø accuracy.

2) <u>the</u> shows the second highest accuracy for all three [-ART] subjects. There is a sharp increase in accuracy between the BA and LM stage for the Chinese and Japanese subjects, the Japanese subject being higher because of her extreme <u>the</u>- flooding. The Russian subjects increase less dramatically but consistently to the MM level, and then drop off.

3) <u>a</u> is lowest in accuracy for all three [-ART] subjects. Each of the subjects

shows a peak followed by a trough, although the IL level at which this happens is different: LM for the Japanese and Russian subjects, MM for the Chinese subjects.

4) the total accuracy plots show a roughly similar pattern for all the [-ART] subjects, and each shows continuous increase in accuracy, with no troughs, across all IL levels.

A comparison of the [+ART] group shows them to have three elements in common:

1) the is the most accurate, starting near the 100% accuracy level for both [+ART] subjects. There is a slight drop in accuracy at the LM level for both the Spanish and the German subjects.

2) even though they start at different levels, a accuracy for both groups exceeds the accuracy at the MM stage (a accuracy would be higher for the Spanish BA subject if her 21 uses of one in place of a were included).

3) the total accuracy plots show a roughly similar pattern for both the [+ART] subjects. As in the [-ART] group, each shows a continuous increase in accuracy, with no troughs, across all IL levels.

Overall Article Accuracy: [+ART] versus [-ART]

Overall article accuracy for the [+ART] group versus the [-ART] group is shown in Figure 6. Combining the groups in this way was motivated by the fact that the different language groups show similar patterns of development in Figure 4. In Figure 5, [+ART] the accuracy again

[Fig. 5 here]

starts high at the BA level, as does [-ART] Ø accuracy. [-ART] Ø accuracy goes on to form a U-shaped curve. [-ART] the accuracy shows the meteoric rise at LM (LM Japanese the-flooding compensating for the lower accuracy of the Russian LM subject), which then continues to climb to higher accuracy at the HM level. [-ART] a accuracy develops in a virtual straight positive slope across all four IL levels.

Conclusions

The conclusions that can be made at this point are the following:

1. the [-ART] accuracy (SOC) pattern differs markedly from the [+ART] accuracy (SOC) pattern
2. the [-ART] group appears to attain ~90% accuracy for the whole article system at the high mesolang (HM) level whereas the [+ART] group appears to attain ~90% accuracy at the mid-mesolang (MM) level
3. the [-ART] acquisition sequence appears to be Ø > the > a (which, if difficulty reflects acquisition order, agrees with the findings of Yamada et al. (1982) for advanced Japanese ESL students), whereas the [+ART] acquisition sequence appears to be the/Ø > a (the three are actually so close at the HM level that there is no readily discernible acquisition sequence; however, a development clearly lags behind Ø and the acquisition)

USAGE

Usage is investigated first within Bickerton's framework. It is then examined in terms of the native languages of the 20 subjects.

Usage within Bickerton's Four Categories

The usage data are examined in terms of Bickerton's four major categories or environments: generic, specific definite, specific indefinite, and indefinite generic. Figure 6 shows usage within the four categories by language group. The three leftmost columns in each

[Fig. 6 here]

square depict the usage of the subjects whose native language belongs to the [-ART] group (Chinese, Japanese, and Russian). The two rightmost columns in each square depict the usage of

the subjects whose native language belongs to the [+ART] group (Spanish and German). The usage figures that determine the height of the columns in Figure 6 are calculated by dividing the number of occurrences of each article by the number of common noun phrases within each category.

In Category I (generic the, Ø, and a), it is clear from Figure 6 that Ø is the predominant article used by all language groups at all IL levels. A is used more at the MM and HM levels than at the BA and LM levels. Extreme generic the usage by the LM Japanese and the MM Chinese subjects probably reflects the-flooding at these stages. However, Category I differs from Categories II to IV in that, despite certain restrictions on their use, all three articles are allowed in this category.

In Category II (specific definite the), the [-ART] group uses incorrect Ø increasingly less as IL level increases, with the most dramatic change occurring between the BA and LM levels. Simultaneously, the usage by the [-ART] group increases dramatically at the same point. The (incorrect) usage of a occurs infrequently for all language groups, although the lower IL levels used it slightly more than the upper IL levels. [+ART] the usage is high at the BA level, drops to a slight trough at the LM level, and then increases at the MM level to nearly 100% usage at the HM level in a characteristic U-shape.

In Category III (specific indefinite Ø and a), Ø usage once again dominates across all five language groups. For the [-ART] group, a usage increases with IL level whereas Ø usage drops considerably at the LM level and then climbs again at the MM and HM levels. For the [+ART] group, the usage (incorrect) is highest at the BA level but diminishes fairly consistently with increasing IL level.

In Category IV, (indefinite generic Ø and a), Ø usage appears to decline with increasing IL level just as a usage increases for all five language groups (with the exception of the BA German subject, who shows high a usage even at the BA level). [-ART] the usage (incorrect) flares a little at the LM level (once again reflecting the-flooding), but subsides by the MM level.

Overall Article Usage for the Five Language Groups

In order to paint a picture of article acquisition, it is necessary to show which of the three

articles is being used, how often and with what degree of target-like use. Ideally, usage will approach 100% accuracy as linguistic competence increases. In other words, let's say a native speaker of English uses the five times. This also reflects five instances when the is required (five obligatory contexts), and if the five usages are divided by the five obligatory contexts, the result (5/5) is one, or a 100% linkage between used and required articles. This used/required formula (which I call UOC for "used in obligatory context" to parallel the well known SOC, supplied in obligatory context) is applied to the three articles for each language group by itself, and the results are plotted in Figure 7. Figure 7 shows that the development of article usage (UOC)

[Fig. 7 here]

creates a kind of funnel, wide at the BA level and increasingly narrow at the HM level as it approaches the 100%-accuracy line. The [-ART] group shows a wide funnel, the [+ART] group a narrow one as the latter clusters more consistently closer to the 100%-accuracy line across all IL levels. The top (widest part) of the funnel for the [-ART] group is defined by a/the and Ø, as Ø usage gradually decreases and a usage increases. In the [+ART] group, the Spanish subjects' a forms the lower side of the funnel although it approaches the 100% line more rapidly than the [-ART] group. However, the German subjects' narrow funnel finds Ø and the making up the sides. This difference is explained by the fact that the Spanish subjects appear to treat a as a newly-acquired item, analagous to the [-ART] acquisition of a and the, whereas the German subjects treat a as an adjusted L1 item, analagous to the [-ART] acquisition of Ø.

Overall Article Usage: [+ART] versus [-ART]

Overall UOC (usage/required) data for the [+ART] group versus the [-ART] group is shown in Figure 8. Combining the two groups in this way is motivated by the fact that the

[Fig. 8 here]

different language groups show similar patterns of development in Fig. 7. Again, the broad-based cone shape of the [-ART] group is readily apparent, with Ø usage gradually decreasing and a gradually increasing. The rises rapidly from the BA level and then consistently drops to the HM

level. This reduction of flooding Huebner (1983) calls "trickling." The Japanese LM the-flooder increased the usage to above the 100% line; without her, the Chinese and Russian LM subjects average 72%. Even so, the most dramatic aspect of the article aquisition process for [-ART] speakers appears to be the simultaneous increase in the usage with a concomitant decrease in Ø usage.

The [+ART] group, on the other hand, shows a high UOC for Ø and the, hovering more or less around the 100%-accuracy line across all IL levels. The most dramatic aspect of their article acquisition process is the rise (at almost a parallel rate to the [-ART] group) in a usage, which I believe to be linked to the acquisition of the English [±count] feature and which seems to constitute a process somewhat apart from the acquisition of Ø and the.

Conclusions

The analyses in the foregoing sections lead to the following general conclusions:

1. Article usage at the BA level seems to reflect the article system, if any, that exists in the L1. The one exception to this is the Spanish usage of a, which seems to be acquired like a new lexical item.
2. The most dramatic acquisition activity for all subjects appears to occur at the LM level. For the [-ART] subjects, this includes a rapid increase in the use of the with a simultaneous decrease in the use of Ø. For the [+ART] subjects, this includes a rapid increase in the use of a for the Spanish subject and a considerable increase in the use of Ø for the German subject.
3. Acquisition of a and the [±count] feature takes place more slowly for the [-ART] than the [+ART] group, the former not achieving this until the HM level, the latter by the MM level.
4. The [+ART]/[-ART] distinction appears to be a useful and valid one in accounting for the acquisition of the English article system.

DISCUSSION

The discussion of the results has two goals. Certain elements of the data will be used to justify the pseudolongitudinal model used in this study by comparing them to the findings of earlier studies. The data will then be discussed in terms of the first hypothesis: that the pattern of accuracy (supplied in obligatory context or SOC) in all aspects of the article system reflects increasing communicative competence. Article usage data (used in obligatory context or UOC) will be referred to in accounting for the shapes of the accuracy graphs.

Justification of Method

This cross-linguistic interlanguage analysis of English article acquisition is a logical consequence of the linkage between negation structure and interlangauge level established by Cancino, Rosansky, and Schumann (1978). All the subjects in the present study were assigned to one of the four interlanguage levels (basilang, low mesolang, mid-mesolang, and high mesolang) based entirely on which negation structure (no(t) + verb, unanalyzed don't, auxiliary + negator, or analyzed don't) was predominant in their English speech (see Table 1). It is apparent from Figure 4 that the accuracy of article usage with common nouns (i.e., excluding proper nouns) increases for all five language groups, and that the negation criteria that Cancino et al. (1978) described for Spanish speakers apply to the interlanguages of the four other language groups as well.

The claim that negation criteria effectively differentiate the interlanguage levels can best be supported by comparing certain aspects of interlanguage article usage in this pseudolongitudinal study with those of true longitudinal studies. The one factor that cannot be compared is the amount of time between IL levels, as a pseudolongitudinal study utilizes different subjects to represent different levels and provides no indication of what the subject's IL looked like before or after the moment of data gathering.

Hakuta (1978), as mentioned earlier, studied the English acquisition of a five-year-old Japanese child. Using Brown's (1973) framework, he charted the accuracy (SOC) of the at ten-

week intervals. In order to compare these results with those in my study, the SOC for my four Japanese subjects is placed alongside Hakuta's figure in Figure 9. Considering the fact that the

[Fig. 9 here]

subjects in my study simply represent some point within the IL level, the similarity in shape to Hakuta's figure, i.e., a peak followed by a trough followed by a gradual rise, is noteworthy and suggests that parallel acquisition characteristics may be taking place.

Huebner (1983b) studied the English acquisition of a Hmong man in his early twenties. He looked at the use of the in the four environments (Categories I - IV) described by Bickerton. In order to compare his results with those in my study, I rendered Huebner's data table for the usage in Category II (specific definite the) and in Category III (specific indefinite Ø and a) in graphic form. Since I did not study Hmong speakers of English, I plotted Category II and III the usage for the Chinese- and Japanese-speaking subjects against Huebner's figures as these southeast Asian languages are the closest to Hmong in my study. The results are shown in Figure 10. Considering

[Fig. 10 here]

once again that the subjects in my study represent some point within the IL level to which they belong, the similarity in shape to Huebner's figure (and this using a counting system completely different to that in the first comparison) is noteworthy and again suggests that parallel acquisition characteristics may be taking place.

Andersen (1977) looked at English article accuracy in a group of native Spanish-speaking students. In arguing for a consideration of a and the as separate morphemes (and not as a single morpheme a la Brown (1973)), he ranked his subjects according to his Group Range method and plotted the increasing accuracy (SOC) of a against the corresponding accuracy of the for each subject. In contrast to Hakuta and Huebner, Andersen's is not a longitudinal study, but to support the assumption that the data in the present study do reflect a developmental continuum, I plotted a and the accuracy for the Spanish subjects in my study against Andersen's figures. The results are shown in Figure 11. Although the lines of the two graphs are necessarily different in

[Fig. 11 here]

shape as Andersen's represents 76 subjects and mine four, it is apparent that a accuracy increases sharply and then gradually approaches 100% accuracy in both graphs. Similarly, the accuracy falls away from near 100% accuracy at the outset and then returns, but never drops too far from the 100% accuracy line.

Lamotte, et al. (1982) investigated English article acquisition in Spanish, Japanese, and Vietnamese speakers using the same model used in this study, i.e., a negation-based interlanguage analysis. Utilizing the TLU (target-like utterance) measure, among others, they reject the use of negation criteria for this purpose, stating, "a negation-based interlanguage continuum may not be the most accurate representation of second language acquisition for all language groups" (p. 8). They cite the lack of a "smooth progression" in the TLU of the Japanese and Vietnamese speakers as the reason for their rejection.

Since a "smooth progression" of article acquisition is not evident even in the longitudinal studies cited earlier (e.g., Hakuta 1976), I found this insufficient reason to reject the negation-based interlanguage continuum. Furthermore, there are problems with the TLU measure, to be discussed below. Nevertheless, Lamotte et al.'s findings concerning article acquisition by native Japanese and Spanish speakers are of interest for the sake of comparison, and they are shown in Figure 12.

[Fig. 12 here]

The similarities shown between the results of other researchers and those of the present study, although approximate, provide support for the assumption that the article data in this study do reflect acquisition to some extent. In other words, these pseudolongitudinal investigations roughly parallel true longitudinal studies. Further research using this framework will have to be undertaken with larger numbers of subjects to definitively establish the foregoing claim, but if that is indeed done, the model described in this study could be used as a basis for studying the acquisition of many aspects of syntax without the need for longitudinal studies, whose time requirement is in many cases prohibitive. At the least, such studies could be used to establish apparent trends, whose reality could then be sought in true longitudinal studies.

The UOC Measure

What are the advantages of the UOC (used in obligatory context) calculation proposed earlier as opposed to the TLU (target-like utterance) measure devised by Stauble 1981? Figure 13 compares how the three measures depict the usage by the Spanish subjects as an example. The

[Fig. 13 here]

SOC line shows simple accuracy. It cannot exceed 100%. The TLU is really a kind of "docking" or penalty. It shows, for example, that the 95% accuracy for Spanish BA the usage is inflated, that it should not be so high because the correct morpheme was used in contexts where it should not have been. The UOC line shows the number of times the was used divided by the number of obligatory contexts. Since it shares the same denominator as the SOC measure, it allows direct comparison. Furthermore, since it can exceed 100%, UOC shows why the accuracy of the at the BA level was so high: it is because the was being overused in a considerable number of article contexts. Since ideally the three measures (SOC, TLU, UOC) all equal one, they all tend to converge at the HM interlanguage level. One suggestion that would clarify matters would be to rename the term SOC (supplied in obligatory context) because the word "supplied" does not adequately distinguish "correct" from "used" morphemes, even though SOC was originally meant to signify "correctly supplied in obligatory context" (Schumann, personal communication). A preferable acronym would be AOC (accurate in obligatory context) to differentiate it from UOC (used in obligatory context).

Article Acquisition in the Five Language Groups

The present study analyzes four "moments" of English IL development in four different subjects who share the same first language. For this reason, it can provide only a very approximate picture of article acquisition. We do not know if the "moment" that each subject represents is on an upward, a downward, or a level trend or precisely where it might exhibit radical departures from a trend. It is hoped that these subjects reflect an IL development that is

common to all speakers of the same native language, but we cannot be sure. We only know that these "moments" do not occur at the same IL level and can thus be reasonably assured that they represent at least successive stages of development.

It is apparent from the figures we have seen thus far that individual article accuracy does not always increase steadily and smoothly with increasing IL level. Instead, it is often characterized by graphs whose shapes seem to be determined by the presence or absence of an article system in the subjects' native language, particularly at the lower IL levels. For this reason, we will look at article acquisition first in the [+ART] languages Spanish and German, and then in the [-ART] languages Chinese, Japanese and Russian. Since acquisition implies accuracy, the descriptions that follow will be based on the accuracy (SOC) data. However, since usage (UOC) data can be very helpful in accounting for certain patterns of accuracy, they will be considered too.

The [+ART] Languages

Spanish

The definite article in Spanish is used in slightly more environments than it is in English, but compared to the [-ART] languages, it is roughly similar. For this reason, as shown in Figure 14, the accuracy in the Spanish BA subject is quite high, probably reflecting the use of the very

[Fig. 14 here]

much as it is used in Spanish. The high UOC for the allows for high the accuracy at this level. The fact that German the accuracy is slightly higher than Spanish the accuracy might be accounted for by the fact that the German definite article (nominative: der, die, das) was usually expressed as die by the German subject (which was always counted as correct) whereas the Spanish definite article (nominative: el, la) is quite different from the and requires the development of a new lexical item. This perhaps accounts for the much lower BA TLU in Lamotte et al. 1982 (see Fig. 12). The Spanish subjects never used el or la in their speech. At the LM level, there is a marked drop in the accuracy, paralleling the decline in the number of uses of the. This could reflect the

"realization" on the part of the learner that although the is similar to Spanish el/la, it is not identical, thereby causing some hesitation in the blind application of the L1 article rules that the BA speakers used so effectively.

The three graphs in Figure 14 show that the BA subject used only Ø and the in her speech and a almost never. Yet at the LM level, a is used to a much greater extent, competing with the and Ø. This suggests that the LM subject has devised a new system that includes all three articles, although her hypotheses for Ø and the continue to overshoot the mark, perhaps showing residual L1 carry-over. The subject knows that only one article can precede a noun (there is little evidence of multiple article use in any of the transcripts in the corpus), and with a as a third choice, she appears to sacrifice the more than Ø, and thereby suffers a greater loss in the accuracy.

Evidence that the LM subject is evincing a new system independent of her L1 comes from the following utterances:

26:10 I live on a four floor

27:8 we are having laundry in a same building

36:26 I think in a day is better

37:26 [Int: Oh, they speak Spanish in the class?] Uh huh, yes, in a class

These utterances would all be expressed with the definite article in Spanish. This suggests that the speaker has shifted from a simple reliance on L1 rules to an interlanguage hypothesis requiring the assignment of a to a singular countable noun since the head nouns in the four utterances are all of this type. From a slightly different angle, we could hypothesize that the speaker has become preoccupied with the complexity of the [±count] feature in English, causing her to override her L1 rules for the definite article. This scenario does not support the findings of Bertkau (1974) that article errors made by Spanish ESL students were more likely to be the product of simplification (e.g., Ø in place of a and the), although the LM subject is clearly trying to reduce the double load of determining the features of [±definite] and [±count] for every noun in the language.

Ø accuracy at the BA level is similar to that of the German BA subject, although Ø usage is

much higher in the Spanish subject because a is so little used. At the LM level, Ø usage drops slightly as accuracy increases, reflecting the fledgling interlanguage article system.

At the MM level, accuracy for all three articles hovers near the 90%-accuracy level and the distance from the UOC line decreases to approximately equal amounts for all three articles. The articles would be labeled "acquired" at this interlanguage level using Brown's (1973) 90%+ criterion. Article usage beyond this point reflects higher accuracy for the, equal accuracy for Ø, and lower accuracy for a, although the drop is partly dependent on the small number of noun phrases in the HM subject's transcript. This subject (Juan) had only 22 obligatory contexts for a, which makes his six errors more prevalent than they would otherwise be. The well over six errors made by three of the four remaining HM subjects is obscured by the high number of noun phrases in their transcripts. In other words, no great significance should be attached to the HM drop in Ø acuracy and usage.

To summarize, article acquisition in the Spanish-speaking subjects in this study appears to take the following pattern:

BA L1 rules are adhered to for Ø and the. A is used very little and one use is far below that in L1.

LM The and Ø usage drops as a usage dramatically increases, leading to decreased the accuracy, slightly increased Ø accuracy, and considerably improved a accuracy. This appears to reflect a developing system for article usage.

MM The and Ø usage continue to fall and a to rise, while accuracy for all three articles hovers near 90%. The article system appears to be nearly target-like at this level.

HM Usage of all three articles hovers around the 100% accuracy line with the exception noted for a. Fluctuations at this stage probably reflect interference from other aspects of the target language, which at this IL level represent many acquired systems.

German

Figure 15 compares SOC and UOC for the German subjects. At the BA level, the accuracy

[Fig. 15 here]

is very high, as it was for the Spanish BA subject. This no doubt reflects L1 article usage, as usage in both subjects is approximately the same, about 120%. Ø usage at this level is much lower for the German subject, but accuracy is similar to the Spanish subject. A major difference from the Spanish subject is the German subject's high a usage and accuracy. This would suggest that the German BA subject has retained a strong sense of the German [±count] system in her English IL. Why the German subject should do this and not the Spanish subject I cannot explain. However, the German subjects used German words in their speech to a much greater extent than all the other subjects in this study, even occasionally at the MM and HM levels. Since English is a Germanic language, perhaps German learners of English have the sense that there is a great similarity between the two languages and this encourages them to transfer lexical items. In the transcripts, although the interviewers spoke only English, the BA and LM subjects often used German words as if they would be readily understood by the interviewer. For example, Elisabeth (BA level) says:

4-22 for de dinner eingeladen (invited)

5-12 I have kennen gelernt viele (met many) people

9-22 three stufes (levels) for the school

And Tina (LM level) says:

1-10 dis is die...grenze (border) von Austria

6-1 I have a German freundin (friend)

11-31 she go under estrich (sidewalk)

None of the other subjects used first language lexicon so freely in their English interlanguage.

At the LM level, the usage declines with a corresponding drop in accuracy in much the same manner as for the Spanish LM subject. However, in contrast to the Spanish subject, a usage and accuracy drop for the German subject. This suggests that rather than creating a new [±count]

system as the Spanish subjects appear to do, the German subjects simply modify their German [±count] systems, with the distance between usage and accuracy diminishing for both a and the. Like the Spanish LM subject, however, the German LM subject also makes errors with the that she would not have made if she had simply been following the rules of her L1. Tina produces the following utterances:

1-31 I am go...to opera

11-27 I see first mal (time)

15-40 Gretel is in house

17-7 im (in) Mexico to congress

These utterances would all be expressed with the definite article in German. However, they seem not to reflect an emerging article hypothesis but rather a simplification of German prepositional phrase structure. In these four cases, the article would have been combined with the preposition in German:

to opera = zur (zu der) Opera

[for] first mal = zum (zu dem) ersten mal

in house = im (in dem) Hause

to congress = zum (zu dem) Kongress

This suggests that rather than grappling with a [±count] system as Blanca appears to be doing, Tina has simply failed to "pull apart" her contracted German preposition + article structures--or dropped them altogether as in line 11-27. This accounts to some extent for the marked increase in Ø usage at the LM level leading to higher Ø accuracy than even the MM subject attains. Whether this increase is characteristic of all German speakers of English or simply of this subject I cannot say. Resolution will depend on extending the same kind of analysis to several German LM level speakers, which is beyond the scope of this study. In any event, Tina's high Ø usage and accuracy might be a result of her tendency to drop potentially confusing aspects of syntax (or better, her recognition that L1 rules no longer apply), which would more closely agree with the simplification strategies noted in Bertkau (1974).

It is perhaps pertinent here to mention the peculiar nature of the zero article. There are few syntactic environments in English where Ø plays such a crucial role, and in terms of acquisition it is certainly unique. Essentially, it requires the recognition on the part of the learner that nothing, the Ø morpheme, equals something, the Ø article. This is unlike most other morphemes measured in morpheme acquisition studies. In Brown, Cazden, and de Villiers, a morpheme is either P (present), A (absent), OG (overgeneralized), or X (incorrectly supplied). For the zero article, however, present and absent (and even overgeneralized and incorrectly supplied under some circumstances) are indicated in the same manner, i.e., with nothing, which creates a problem for the interlanguage researcher: Is the morpheme being used or neglected? A similar problem must occur for the ESL learner, which will become apparent when we discuss article acquisition by the [-ART] language groups.

At the MM level, a and the usage hovers near the 90%- accuracy level, as it did for the Spanish subjects, and these articles can be said to be acquired at this point. The drop in Ø accuracy, despite the similar level of usage to the Spanish LM subject, is partially the result of [±count] problems, as is seen in the following examples from Reto:

1-30 they have a radar

4-16 it's a small traffic [= there's not much traffic]

10-53 they go with exposation (explosion) [= they caused an explosion]

This might suggest that the establishment of an independent [±count] system appears later in the interlanguage of German speakers than it does for Spanish speakers. On the other hand, it may be unique to this subject. Article accuracy at the HM level continues to approach the 100%-accuracy level as the distance between usage and accuracy decreases to zero.

To summarize, German acquisition of the English article system appears to take the following pattern:

BA L1 rules are adhered to for all three articles.

LM The and a usage drop with a corresponding decrease in accuracy. Ø usage sharply increases, partly reflecting the simplification of an L1 structure

(preposition-article contraction).

MM The and a hover near the 90%-accuracy level, Ø somewhat lower (84%), possibly reflecting adjustment of the [±count] feature. The system is essentially acquired.

HM Accuracy is near the 100% level for all three articles.

The [-ART] Languages

Chinese

The BA level Chinese subject depicted in Figure 16 shows a pattern of article usage that

[Fig. 16 here]

is quite different from the corresponding [+ART] subjects. Ø "usage" is extremely high, reflecting not usage at all but rather the lack of any article system in the native language. Since a and the are used hardly at all, most noun phrases are "marked" with Ø, leading to nearly 100% accuracy for this article.

At the LM level, Ø usage drops to make way for a considerable rise in a and the usage, resulting in a slight drop in Ø accuracy. This reflects a strong parallel with the acquisition in the [+ART] group: in both cases, the presence of a similar feature in the L1 leads to high usage and accuracy at the BA level which at the LM level must be decreased to make way for increasing use of the other articles. They lead to decreased the accuracy for the [+ART] group and decreased Ø accuracy (or, at least, no increase for the Chinese subject) for the [-ART] group.

The rise to approximately 50% a accuracy at the LM level suggests, as it did for a similar level of accuracy in the Spanish subject, that a new system is being developed that includes the features [±definite] and [±count]. The [±definite] feature seems to be of greater importance (or perhaps greater ease) for the developing interlanguage, as the usage and corresponding accuracy are considerably higher than a usage and accuracy. The same will be even more pronounced for the other [-ART] subjects.

At the MM level, Ø usage continues to drop with a slight increased in Ø accuracy. Can we

say that the zero article is now being chosen as opposed to articles simply being dropped as was clearly the case at the BA level? This is the problem with the Ø article.

A usage and accuracy drop at the MM level, but only slightly. Such a drop was described for the German MM subject as arising partially from adjustment of the [±count] feature. And indeed, Dr. X makes similar errors:

5-25 know the basic of foreign language

8-8 my interesting is to learn...a art history

12-3 I stay in American (America) or western country

He also sometimes uses one instead of a, which is scored as being incorrect:

1-45 I waste (visit) one professor

2-22 I have /raiten/ (written) one books

13-4 I have one plan

The usage continues to climb at the MM level, but accuracy stays about the same. Unlike for the [+ART] group, the article system can not be said to be acquired at this level, although a working system is well in place and the distance between usage and accuracy diminishes considerably for Ø. At the HM level, Ø and the accuracy are very near the 100% accuracy level. Ø is still being overused a little, with a corresponding underuse of a, again probably reflecting adjustments to the [±count] feature. The system can be said to be acquired at this point.

In summary, Chinese acquisition of the English article system appears to take the following pattern:

BA L1 conditions (i.e., no articles used) dominate, resulting in very high Ø accuracy.

LM Ø usage and accuracy decrease. A usage and accuracy increase to around 50%. The usage rises dramatically to almost 90%, with a corresponding accuracy of just over 75%.

MM Ø usage continues to fall as Ø accuracy starts to increase. The usage continues to rise while accuracy levels out. A usage and accuracy fall

slightly.

HM Ø usage declines to the least distance from the accuracy line, which is almost 100%. The usage and accuracy converge at just below 100%. A usage and accuracy come together at about 80%, possibly reflecting adjustment of the [±count] feature. The system is essentially acquired.

Japanese

The BA level Japanese subject depicted in Figure 17 shows a pattern of article usage that

[Fig. 17 here]

is quite similar to that of the Chinese subject (Fig. 16). Ø "usage" is again quite high, with the result that Ø accuracy is almost 100%. The usage is very low, though not as low as it was for the Chinese BA subject. However, a usage is already at nearly 50%, with a corresponding a accuracy of about 35%. This suggests that the Japanese BA subject is at a higher basilang level than her Chinese counterpart, and indeed, her English is considerably more fluent, with a much larger vocabulary. This indirectly supports an earlier suggestion that control of a and the [±count] system is a product of experience rather than a strategy such as the-flooding. It is also interesting to note that for all the subjects discussed so far, the distance between a usage and a accuracy is invariably the smallest, often with no difference at all. This suggests that a, unlike Ø and the, is used rather deliberately and not just as a random guess.

At the LM level, the picture is quite different from the Chinese subjects. The LM Japanese subject is the the-flooder. The graph shows the effect of this subject's strategy: the is used to such a great extent that accuracy climbs to almost 90%. Something has to give to allow this much the usage, and Ø usage plunges with a corresponding drop in accuracy. Huebner (1983b) found his Hmong subject to the-flood to a similar degree and questions arise as to the universality of this phenomenon: do all Hmong and Japanese learners of English employ the strategy or only certain individuals? Why didn't the Chinese LM subject flood to the same extent? These questions can only be answered by conducting the same study using many individuals with the same L1 and IL

level.

Despite the LM Japanese subject's extreme flooding behavior, a usage and accuracy remain at about the same level as for the Chinese LM subject, providing evidence once more that the control of a is part of another system (adjustment of the [±count] feature) that matures somewhat independently of the article system.

At the MM level, usage and accuracy for all three articles is very similar to the Chinese MM subject: Ø is still overused with an accuracy near 100%, a usage and accuracy converge near 50%, and the is at around 80% accuracy, the usage having dropped considerably. The usage and accuracy of a still remain well below that of the and Ø, which appear to be the competing hares in the race, while the turtlish a creeps along at its steady pace.

At the HM level, the Japanese subject continues to parallel the usage and accuracy of the Chinese subject. In contrast to the BA subjects, the language of the Chinese subject is somewhat more fluent than that of the Japanese speaker, suggesting that the former is a little further along in the HM level than the latter. This is reflected by the Japanese subject's slightly lower accuracy for both a and the. The system can be said to be acquired at this point.

In summary, Japanese acquisition of the English article system appears to take the following pattern:

BA L1 conditions (i.e., no articles used) dominate, resulting in very high Ø accuracy and low the usage [this subject's a usage is quite high for a [-ART] basilang subject, suggesting that she is rather a late basilang, which her negation supports].

LM Ø usage and accuracy fall in response to extreme the-flooding, which produces abnormally high the accuracy [whether this pattern is true for all Japanese speakers remains to be studied]. A usage and accuracy remain below 50%.

MM Ø usage rises to a point close to that of the Chinese MM subject. The usage falls from the flooded height while accuracy levels out. A usage and accuracy

stay at about the same level.

HM Ø usage declines to the least distance from the accuracy line, which is almost 100%. The usage and accuracy converge at just below 90%. A usage and accuracy come together at about 80%, possibly reflecting adjustment of the [±count] feature. The system is essentially acquired.

With the exception of the degree of the-flooding at the LM stage, the Chinese and Japanese subjects show very similar patterns of article acquisition.

Russian

The BA level Polish subject depicted in Figure 18 shows a pattern of article usage that

[Fig. 18 here]

is very much like the Chinese and Japanese BA subjects. Ø "usage" is extremely high, leading to nearly 100% accuracy. A and the are used seldom, more frequently than by the Chinese subject and less frequently than by the Japanese subject.

At the LM level, Ø usage drops steeply, but accuracy remains about the same. As was the case for the Chinese and Japanese subjects, the usage increases dramatically at the LM level, resulting in increased accuracy; however, this increase is not as steep as the increase shown by either the Japanese or Chinese subjects. A usage and accuracy are actually slightly lower than that of the BA subject: presumably, it is the [±count] feature that is causing difficulties.

At the MM level, Ø usage continues to drop, this time affecting accuracy slightly. The usage has risen to just over 100% with a concomitant accuracy of around 90%. A usage and accuracy (practically identical in these subjects) has risen considerably to around 80%. It should be pointed out that the usage (UOC) measure of over 100% cited above does not depict a one-to-one correspondence. It simply indicates that the number of times the article was used was slightly higher than the number of times it was required.

At the HM level, Ø usage and accuracy converge near 100%. A accuracy is over 90%. The usage and accuracy converge at a slightly lower level than the MM subject.

In summary, Russian acquisition of the English article system appears to take the following pattern:

BA L1 conditions (i.e., no articles used) dominate, resulting in very high Ø accuracy. A and the are used very little.

LM Ø usage decreases and Ø accuracy remains at the same level. The usage and accuracy increase sharply. A usage and accuracy decrease slightly.

MM Ø usage continues to decline, this time resulting in slightly decreased accuracy. The usage and accuracy rise to over 90%. A usage and accuracy rise to 80%.

HM Ø usage and accuracy converge near 100%. The usage and accuracy declines slightly. A usage and accuracy converge near 95%. The system is essentially acquired.

The Russian subjects behave in much the same way as the other members of the [-ART] group, with two exceptions: the usage and accuracy climb less steeply and a usage and accuracy climb more steeply. In some ways, this places the Russian subjects midway between the [+ART] and [-ART] groups. This might be because the three Russian subjects (but not the Polish one) were all Jewish, and as such they might well have been exposed to Yiddish, which, like German, does have an article system. On the other hand, Russian, German, and Spanish are all Indoeuropean languages and perhaps it is this overall relatedness that makes the Russian subjects more like the [+ART] group while clearly belonging to the [-ART] group.

Conclusion

What is clear from the foregoing description of article acquisition by representatives of the five language groups is that speakers whose first language contains an article system behave in roughly the same manner and that speakers whose first language does not contain an article system behave in roughly the same manner. This conclusion supports the proposal in Hypothesis I that the pattern of accuracy in the use of the English article system reflects increasing communicative

competence: if this were not the case, there would have been no consistent pattern among any of the language groups. The [+ART] group appears to acquire the article system by the MM level; the [-ART] group appears to acquire the article system not until the HM level. Finally, for all subjects, a appears to function somewhat independently of the article system, evincing for the most part a more gradual acquisition process than the wildly fluctuating Ø and the, and it is proposed that this is the result of the fact that a represents acquisition and control of the [±count] feature. The fluctuations in the use of Ø and the at various stages suggest that it is these articles, especially the, that are used in hypothesis testing about the article system, and not a.

Suggestions for Further Research

The greatest need for further research, as has been mentioned throughout this study, is the reduplication of the present study with a much larger number of subjects. In other words, there should be at least five if not ten or more representatives of each language group at each IL level (i.e., 100 to 200 subjects). This would allow the use of statistical procedures and should provide significant results as opposed to the rather speculative ones that characterize this interlanguage analysis of article usage. Nevertheless, article usage seems to function well as an unconscious indicator of overall interlanguage level, unconscious because the articles are used so frequently in their English speech that the subjects have little time to dwell on article choice. It is this very unconsciousness that allows a measure of generalizability from a single subject.

REFERENCES

Andersen, R. 1977. The impoverished state of cross-sectional morpheme acquisition/accuracy methodology. Paper presented at the Los Angeles Second LanguageResearch Forum (SLRF).

Bailey, C. J. N. 1973. *Variation and Linguistic Theory.* (Arlington, VA.: Center for Applied Linguistics).

Bailey, N. C. Madden, and S. Krashen. 1974. Is there a natural sequence in adult second language learning? *Language Learning* 24.2:235-243.

Bertkau, J. 1974. An analysis of English learner speech. *Language Learning* 24:279-286.

Bickerton, D. 1975. Creolization, linguistic universals, natural semantics and the brain. Paper presented at the International Conference on Pidgins and Creoles, University of Hawaii, 6-11 January, 1975.

Bowerman, M. 1982. Starting to talk worse: clues to language acquisition from children's late speech errors. In S. Strauss (Ed.) *U-Shaped Behavioral Growth* (New York: Academic Press).

Brown, R. 1973. *A First Language* (Cambridge, Mass.:Harvard University Press), pp. 340-356.

Cancino, H., E.J. Rosansky, and J.H. Schumann. 1978. The acquisition of English negatives and interrogatives by native Spanish speakers. In E. Hatch (Ed.) *Second Language Acquisition* (Rowley, Mass.: Newbury House Publishers), pp. 207-230.

de Villiers, J. and P. de Villiers. 1973. A cross- sectional study of the acquisition of grammatical morphemes in child speech. *Journal of Psycholinguistic Research* 2:267-278.

Duley, H.C. and M.K. Burt. 1974a. Natural sequences in child second language acquisition. *Language Learning* 24.1:37-53.

--------- and E. Hernandez. 1973. *Bilingual Syntax Measure* (Restricted Edition). (New York: Harcourt Brace).

Hakuta, K. 1976. A case study of a Japanese child learning English as a second language. *Language Learning* 26:321-351.

Hatch, E.M. 1978. Acquisition of syntax in a second language. In J. Richards (Ed.) *Understanding Second and Foreign Language Learning: Issues and Approaches* (Rowley, Mass.: Newbury House Publishers), pp. 34-70.

Huebner, T. 1979. Order-of-acquisition vs. dynamic paradigm: a comparison of method in interlanguage research. *TESOL Quarterly* 13:21-48.

---------. 1983a. Linguistic systems and linguistic change in interlanguage. *Studies in Second Language Acquisition* 6:39-52.

---------. 1983b. *A Longtitudinal Analysis of the Acquisition of English* (Ann Arbor, MI: Karoma Publishers).

Kellerman, E. 1984. If at first you do succeed... In S. Gass and N. Madden (eds.) *Input in Second Language Acquisition* (Rowley, MA: Newbury House), pp. 345-353.

Lamotte, J., D. Pearson-Joseph, and K. Zupko. 1982. A cross-linguistic study of the relationship between negation stages and the acquisition of noun phrase morphology. Unpublished paper, University of Pennsylvania.

Larsen-Freeman, D. 1978. An explanation for the morpheme accuracy order of learners of English as a second language. In E. Hatch (Ed.) *Second Language Acquisition* (Rowley, Mass.: Newbury House Publishers), pp. 371-379.

Master, P. 1985. An interlanguage analysis of a high- mesolang Romanian speaker. Unpublished paper, UCLA.

Neuman, R.A. 1977. An attempt to define through error analysis the intermediate ESL level at UCLA. MA-TESL thesis, UCLA.

Parish, B., E. Tarone, and R. Taghavi. 1986. Article usage in interlanguage: A study in task-related variability. Paper presented at the 1986 TESOL convention.

Stauble, A.M. 1977. An exploratory analogy between decreolization and second language learning: negation. MA-TESL thesis, UCLA.

---------. 1981. A comparison of the Spanish-English and Japanese-English interlanguage continuum. Paper presented at the European-North American Workshop on Cross-Linguistic SLA Reseach, Lake Arrowhead.

Tarone, E. 1985. On chameleons and monitors. Paper presented at the Los Angeles Second Language Research Forum (SLRF).

Yamada, J. and N. Matsuura. 1982. The use of the English article among Japanese students. *RELC Journal* 13.1:50-63.

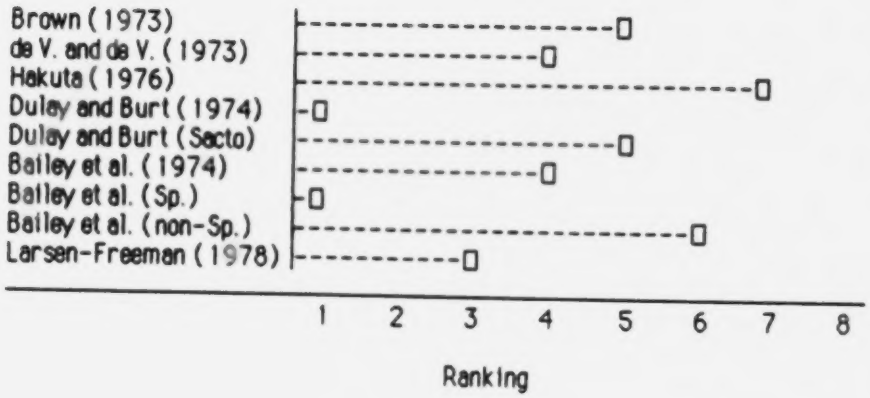

Figure 1. Article Ranking in Several Studies

#	Line	Noun Phrase	Used	Required	Category
216	8-41	the winner from this group	the	the	2

Figure 2. Format of Pulled Utterances

Table 1. Verbal Negation in the Twenty Subjects

#	SUBJ	L1	No(t) + V		Unan don't		Aux - neg		An don't		Intviewer
Basilang											
1.	Ah Chun	CH	31/32	97%	1/32	3%	0/32	0%	0/32	0%	Lin
2.	Elizab	GE	39/44	89%	0/44	0%	5/44	11%	0/44	0%	Ediger
3.	Amy	JA	71/84	85%	6/84	7%	3/84	4%	4/84	5%	Moore
4.	Gersona	SP	51/51	100%	0/51	0%	0/51	0%	0/51	0%	Bechet
5.	Kinga	PO	55/75	73%	10/75	13%	10/75	13%	0/75	0%	Cannon
Low Mesolang											
6.	Guican	CH	1/50	2%	24/50	48%	21/50	42%	4/50	8%	Li
7.	Blanca	SP	7/83	8%	48/83	58%	24/83	29%	4/83	5%	Bernstein
8.	Yoko	JA	2/56	3%	25/56	45%	24/56	43%	5/56	9%	Walters
9.	Repin	RU	5/52	9%	31/52	60%	15/52	29%	1/52	2%	Newmark
10.	Tina	GE	2/32	6%	17/32	53%	13/32	41%	0/32	0%	Master
Mid-Mesolang											
11.	Dr. X	CH	1/37	3%	8/37	22%	28/37	75%	0/37	0%	Taylor
12.	Mako	JA	0/24	0%	11/24	46%	12/24	50%	1/24	4%	Jacobs
13.	Ruben	SP	1/64	2%	18/64	28%	32/64	50%	13/64	20%	Gregory
14.	Nina	RU	1/27	4%	12/27	44%	14/27	52%	0/27	0%	Flashner
15.	Reto	GE	0/60	0%	27/60	45%	33/60	55%	0/60	0%	Master
High Mesolang											
16.	Igor	RU	0/82	0%	0/82	0%	38/82	46%	44/82	54%	Master
17.	Hitomi	JA	0/135	0%	0/135	0%	32/135	39%	83/135	61%	Master
18.	Joan	GE	0/104	0%	0/104	0%	35/104	34%	69/104	66%	Billings
19.	Juan	SP	1/37	3%	0/37	0%	14/37	38%	22/37	59%	Borkowski
20.	Mingte	CH	0/56	0%	6/56	11%	10/56	18%	40/56	71%	Master

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Table 2. Background Data on the Twenty Subjects

SUBJECT	L1	Age	Sex	Birthplace	Occupation	Other langs	Age ar.US	Time in US	Level of Education	English N.Land	English in US	Date of Interview	Interviewer
Ah Chun	CH	63	F	China (PR)	housekeeper	None	47	16 ys	Elementary	1 yr	None	Winter 82	Y.Lin
Elis.	GE	21	F	Switzerla.	sport train	FR	21	3 wks	Tech schl	9 mos	3 wks	3-4-85	A.Ediger
Aay	JA	54	F	Japan	housewife	None	32	18 ys	Little	None	None	Winter 82	V.Moore
Gersona	SP	48	F	Honduras	housekeeper	None	43	5 ys	Junior HS	None	3 ys	3-19-85	J.Bechet
Kinga	PO	93	F	Poland	grandmother	None	61	32 ys	High schl?	None	None	1982	L.Cannon
Guican	CH	43	M	China (PR)	professor	None	43	6 mos	University	Little	6 mos	3-24-86	J.Li
Blanca	SP	30	F	El Salvadr	housekeeper	None	23	7 ys	High schl.	None	7 mos	Winter 84	Bernstein
Yoko	JA	30	F	Japan	fashion des	None	25	5 ys	High schl.	8 ys	2 ys	3-19-84	P.Walters
Repin	RU	60	M	Russia	professor	GE,IT	58	1.5 ys	University	None	None	1982	D.Newmark
Tina	GE	47	F	Germany	med. asst.	FR	46	.75 ys	Prof. schl	None	4 mos	11-18-86	P.Master
Dr. I	CH	60	M	China (PR)	professor	RU,JA	60	2 mos	University	Little	None	3-26-86	H.Taylor
Mako	JA	13	M	Japan	JHS student	None	13	3 mos	8th grade	1.5 ys	3 mos	Winter 85	B.Jacobs
Ruben	SP	26	M	Argentina	activist	IT	19	7 ys	High schl.	None	4 ys	3-16-84	S.Gregory
Nina	RU	66	F	Russia	engineer (r)	None	59	7 ys	University	Little	2 ys	1982	V.Flashner
Reto	GE	23	M	Switzerla.	mechanic	FR	23	9 wks	High schl.	5 ys	10 wks	6-5-86	P.Master
Igor	RU	25	M	Russia	pre-med	None	20	6 ys	University	6 ys	1 y	10-30-86	P.Master
Hitomi	JA	34	F	Japan	TESL student	None	21	15 ys	University	6 ys	10 ys	10-25-86	P.Master
Joan	GE	45	F	Germany	housewife	RU	24	21 ys	High schl.	None	None	Winter 80	M.Billings
Juan	SP	26	M	Argentina	student	None	26	1 mo.	High schl.	3 ys	5 wks	3-19-85	Berkowski
Mingte	CH	25	M	Taiwan	student	None	25	7 mos	University	?	7 mos	6-4-86	P. Master

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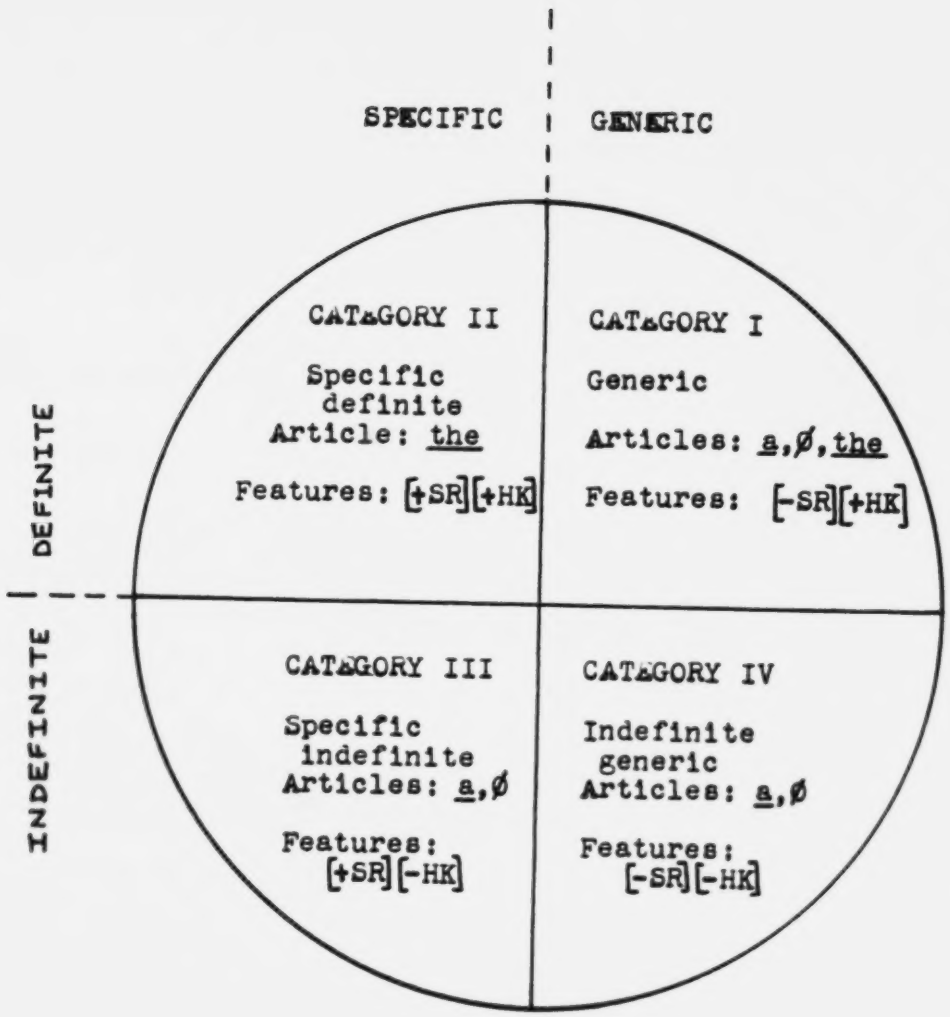

Figure 3. Bickerton's "Semantic Wheel of Noun Phrase Reference"

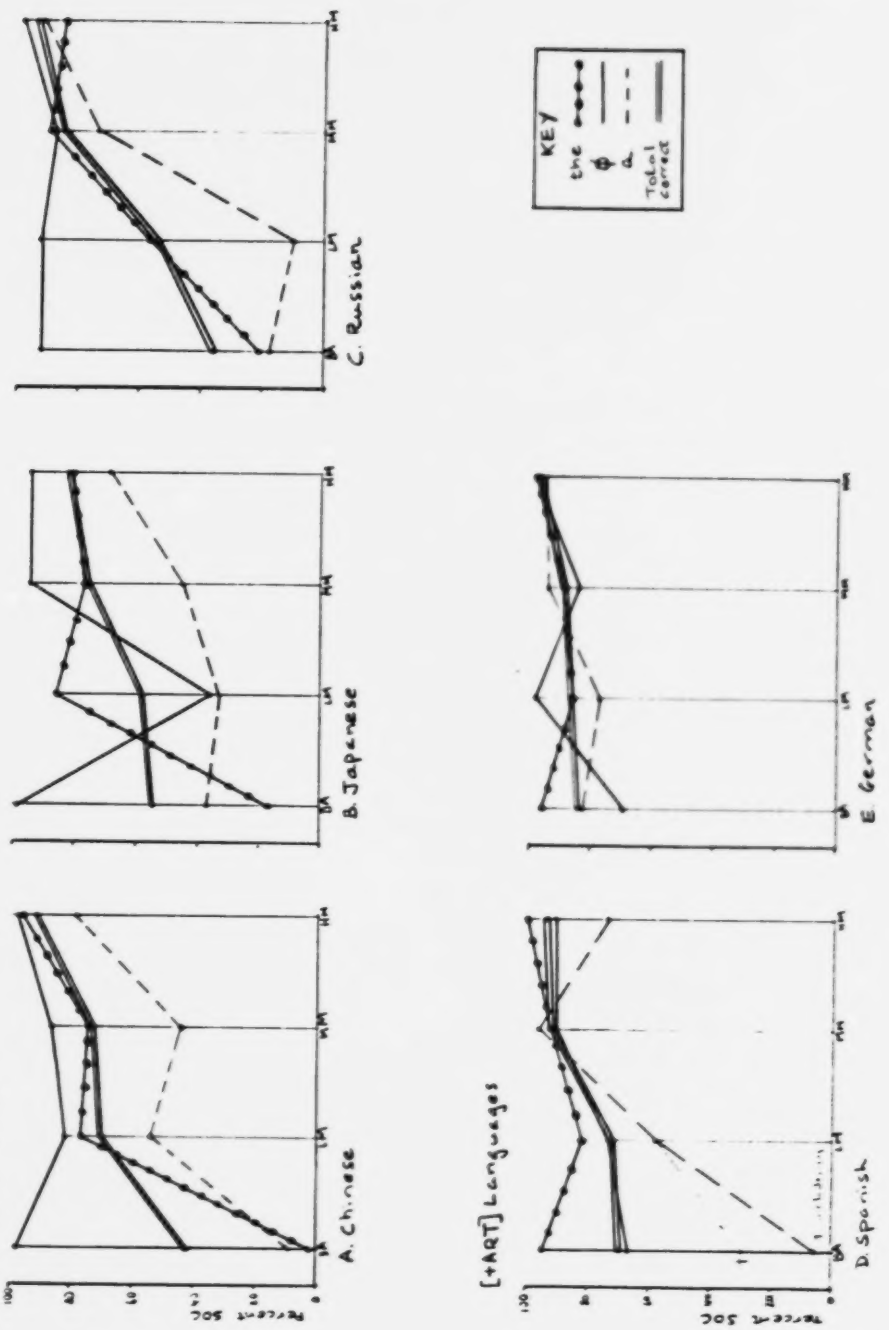

Fig. 4. Accuracy (SOC) for Each Language Group

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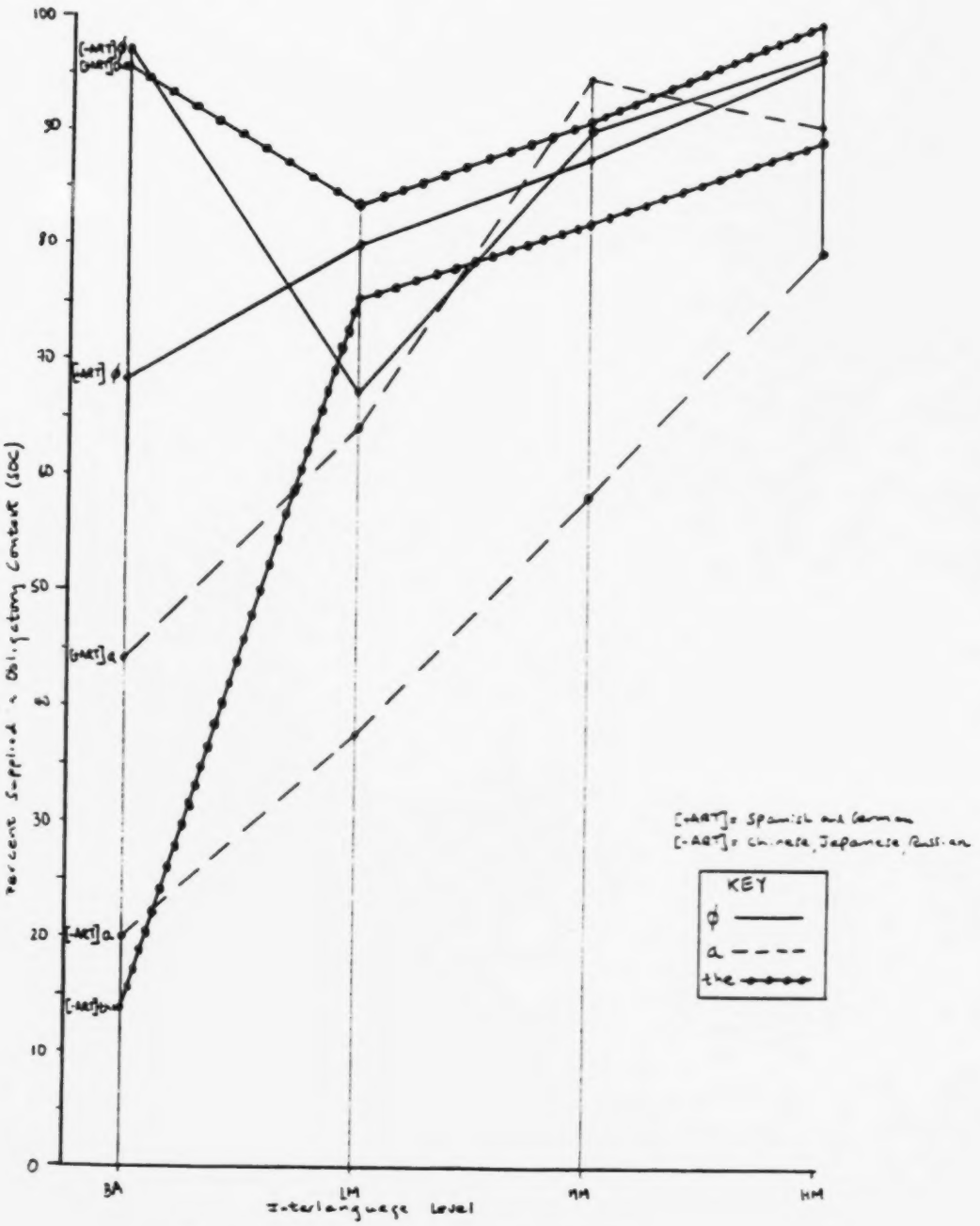

Figure 5 Overall Article Accuracy

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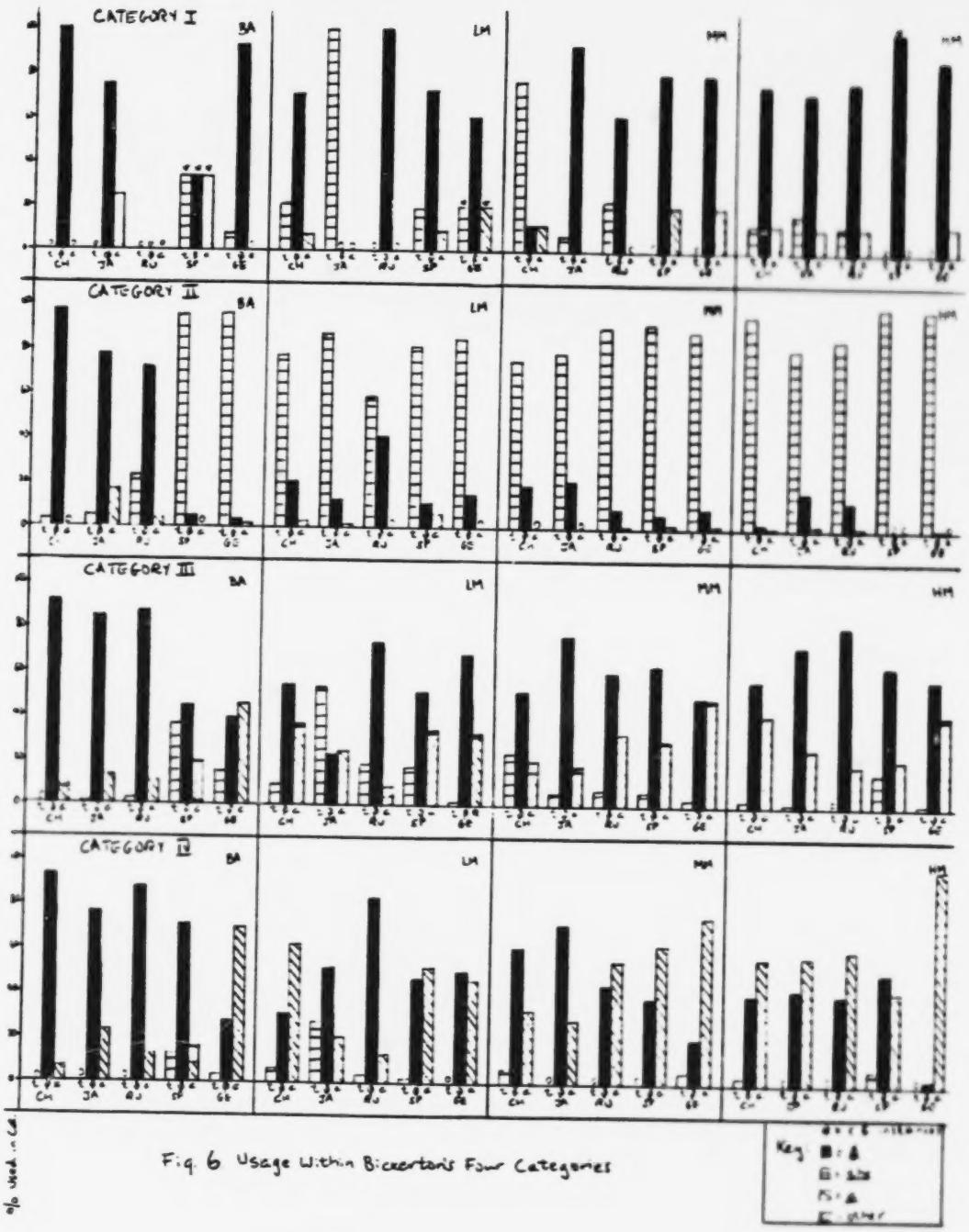

Fig. 6 Usage Within Bicentenial Four Categories

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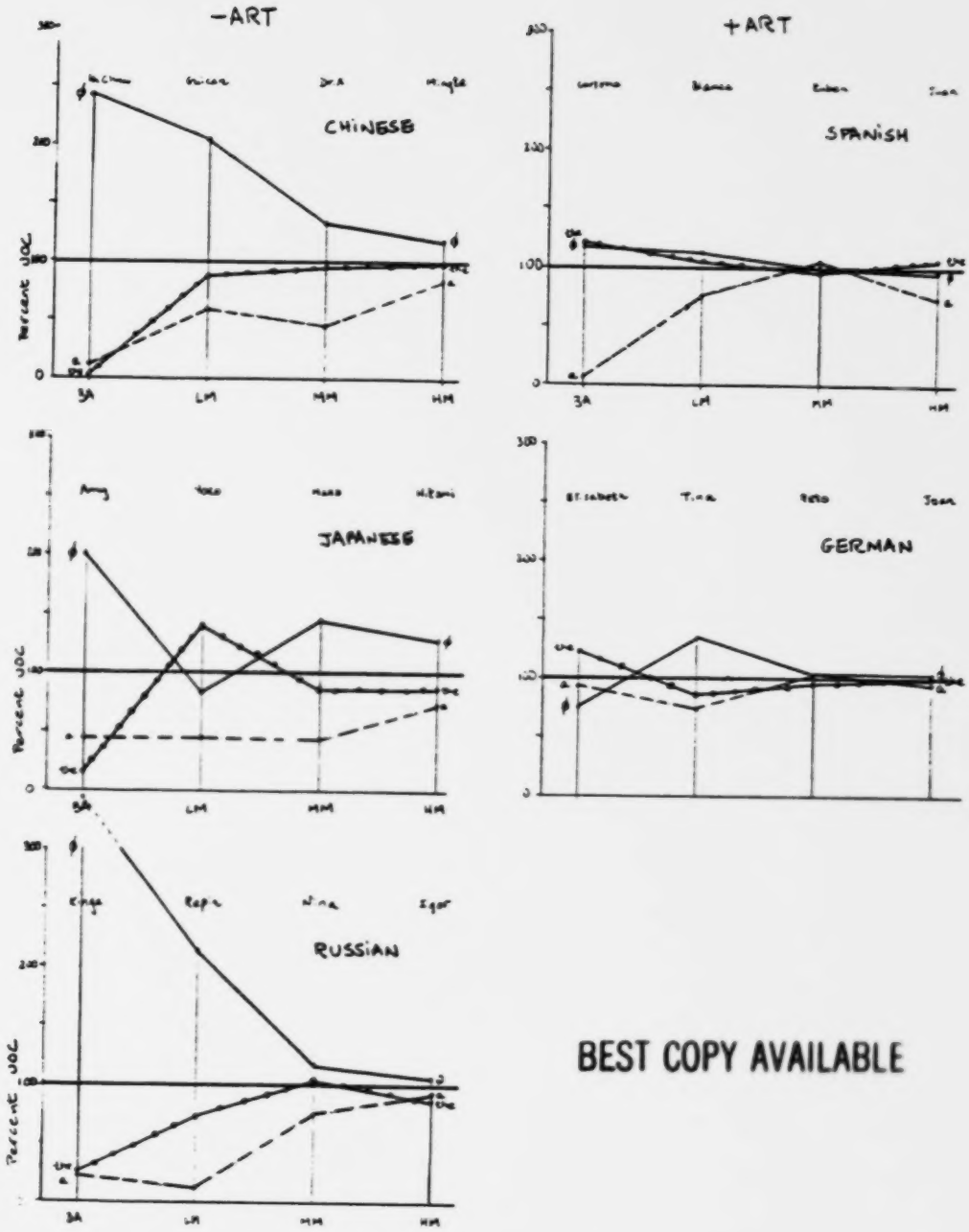

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Fig. 7. Articles Used/Articles Required (UOC)

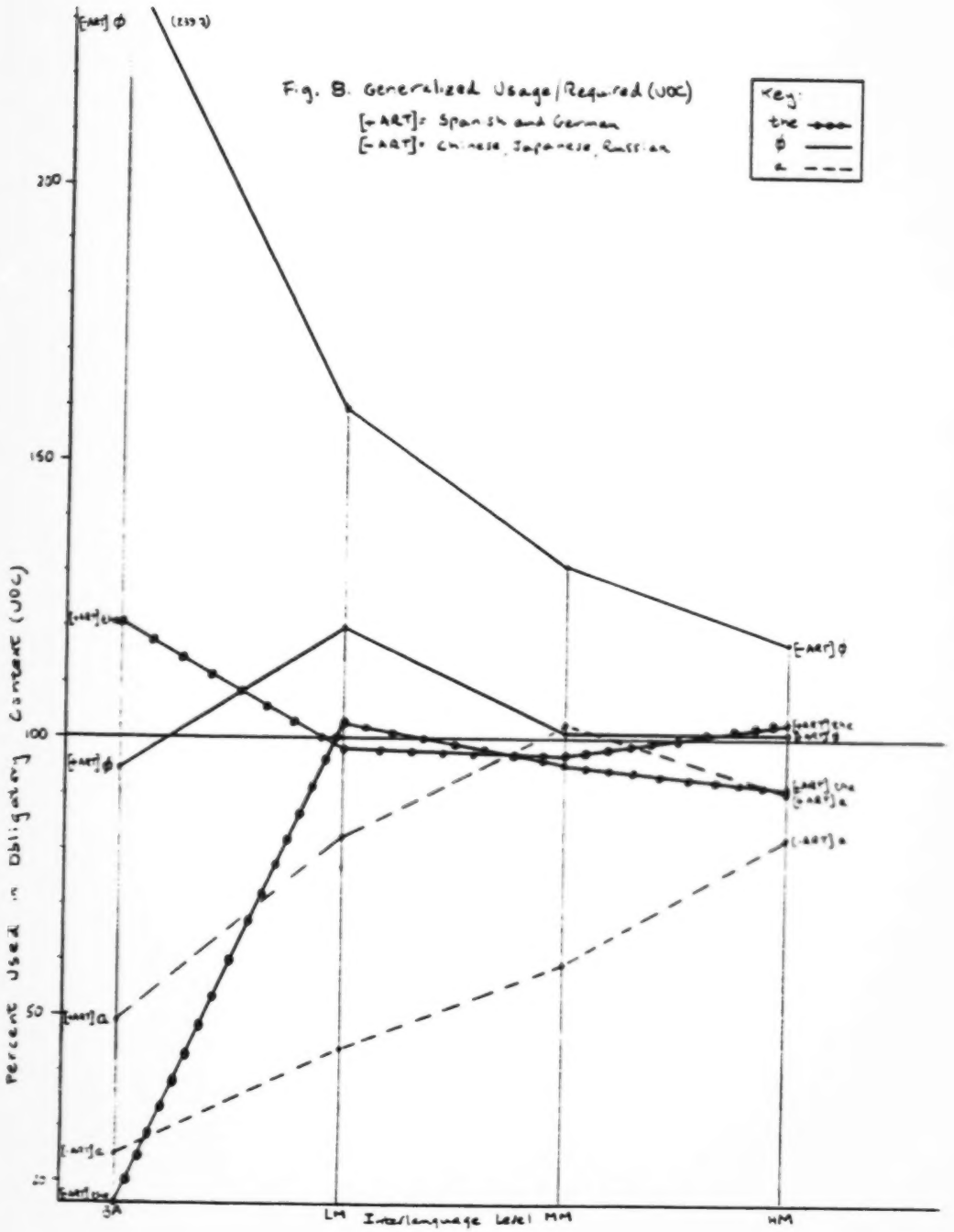

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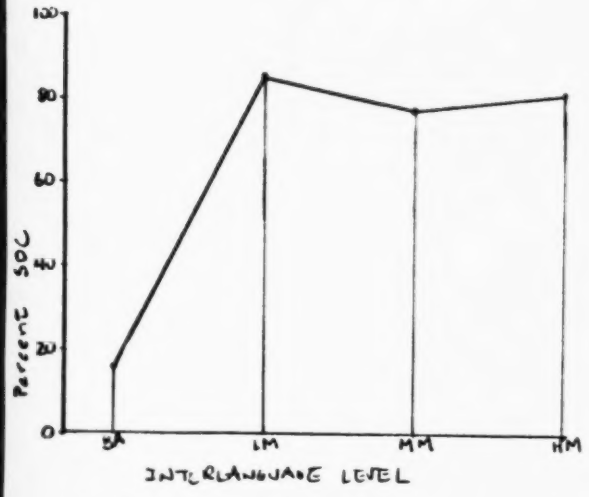
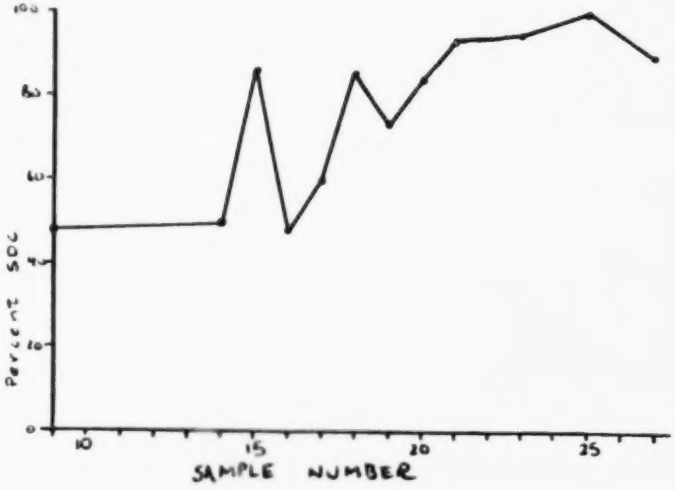
Fig. 9. Comparison of Japanese Subjects with Uguisu (Hakuta 1975) in the SOC



A. Japanese Subjects: the SOC



B. Uguisu: the SOC

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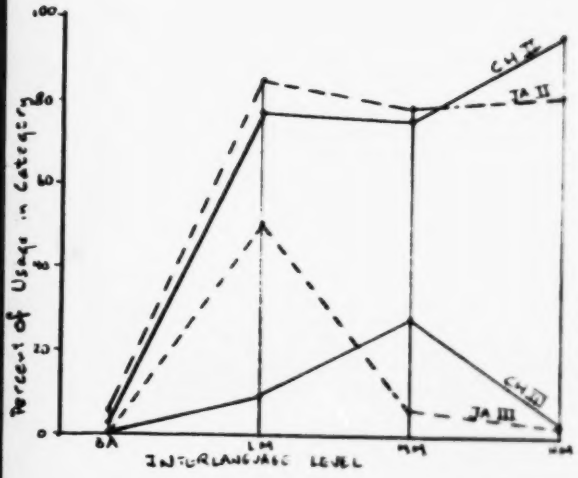
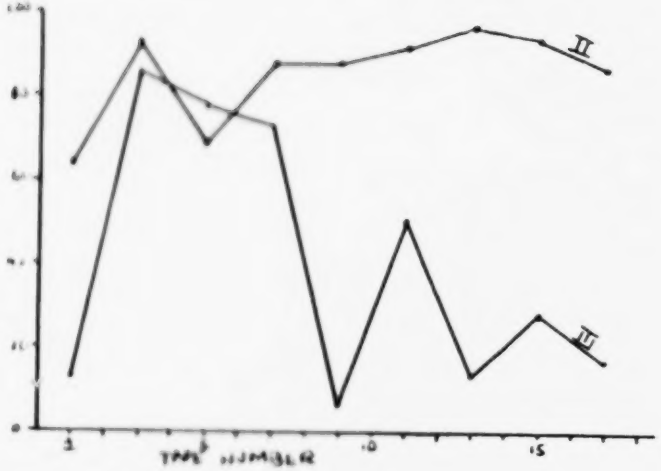
Fig. 10. Comparison of Japanese and Chinese Subjects with Ge (Huebner 1983b) in Category II and III the Usage



A. Chinese and Japanese the Usage in Categories II (correct) and III (incorrect)



B Ge's the Usage in Categories II (correct) and III (incorrect)

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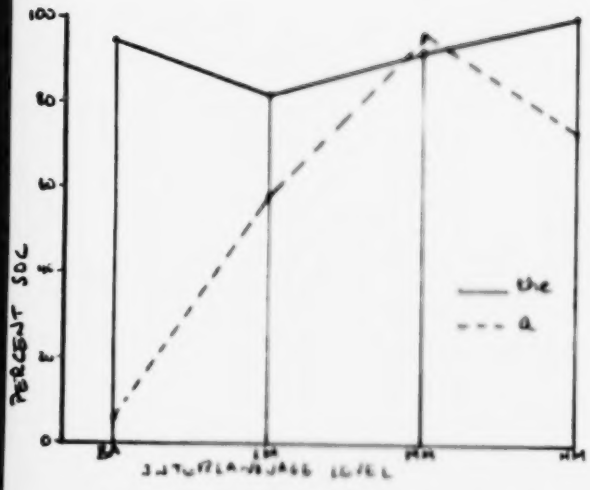
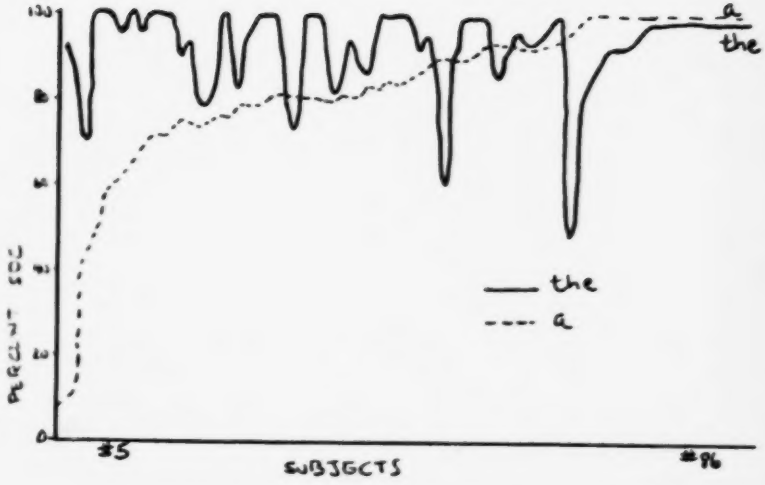
Fig 11. Comparison of Spanish Subjects with Andersen's (1979) Spanish Subjects in the and a SOC



A. Spanish Subjects' the and a SOC



B. Andersen's Spanish Subjects' the and a SOC

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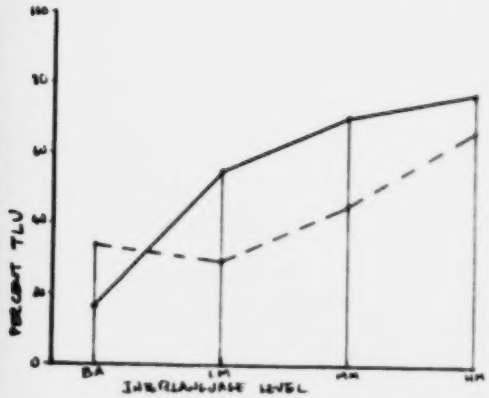
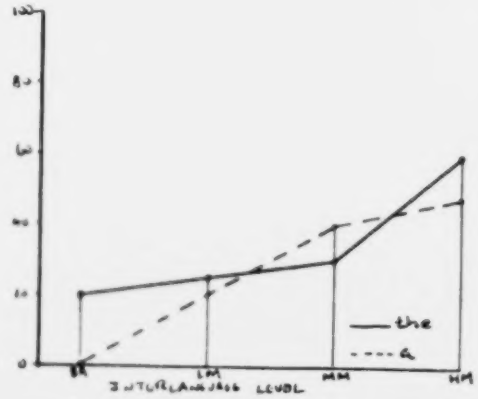
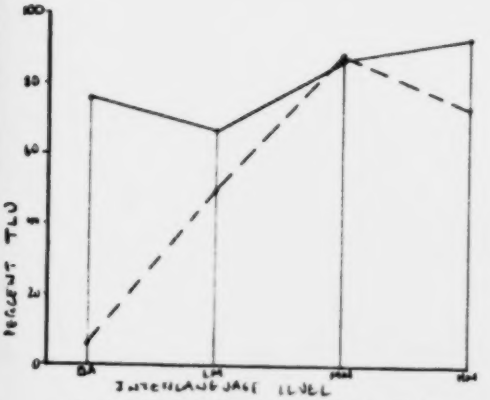
Fig 12. Comparison of Japanese and Spanish Subjects with Lamotte's et al. (1982) Japanese and Spanish Subjects in the and a TLU



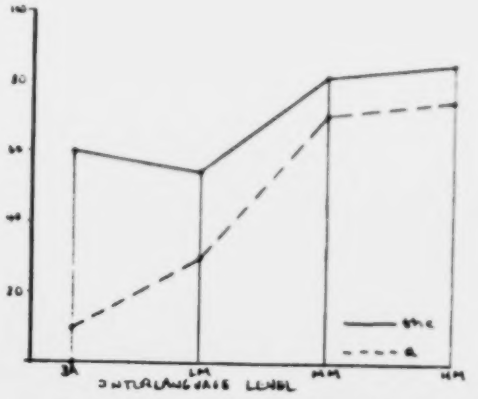
A Japanese Subjects' the and a TLU



B Lamotte et al. (1982) Japanese the and a TLU



C Spanish Subjects' the and a TLU



D. Lamotte et al. (1982) Spanish the and a TLU

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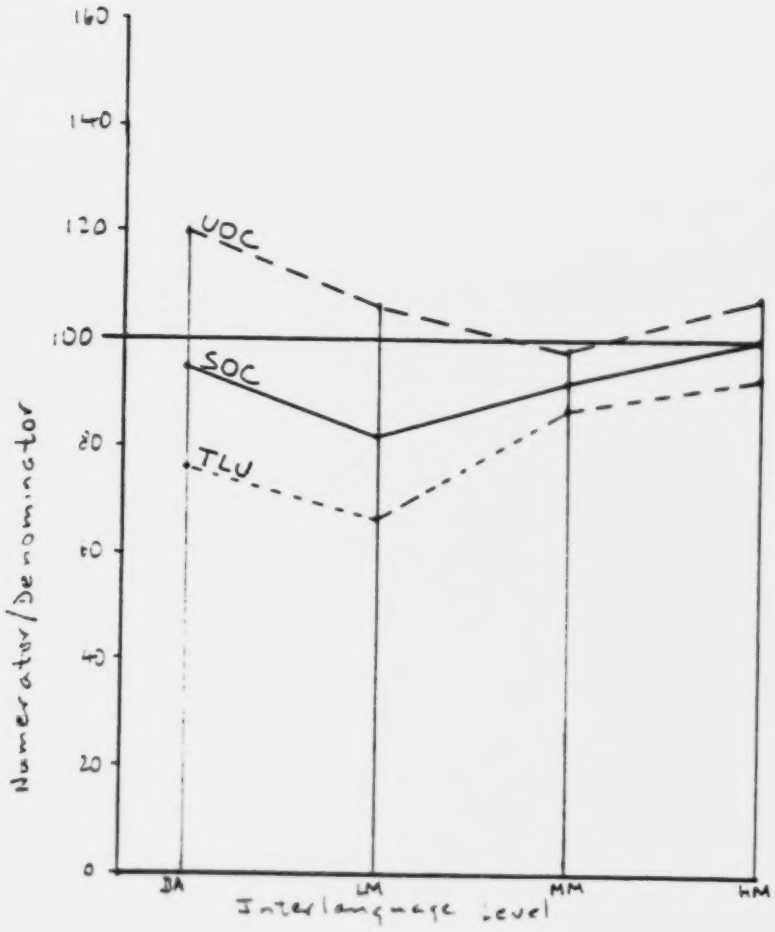

Fig. 13. Comparison of UOC, SOC, and TLU in the Spanish Subjects' Usage of <u>the</u>

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Fig. 14. SPANISH Accuracy vs Usage (UOC)

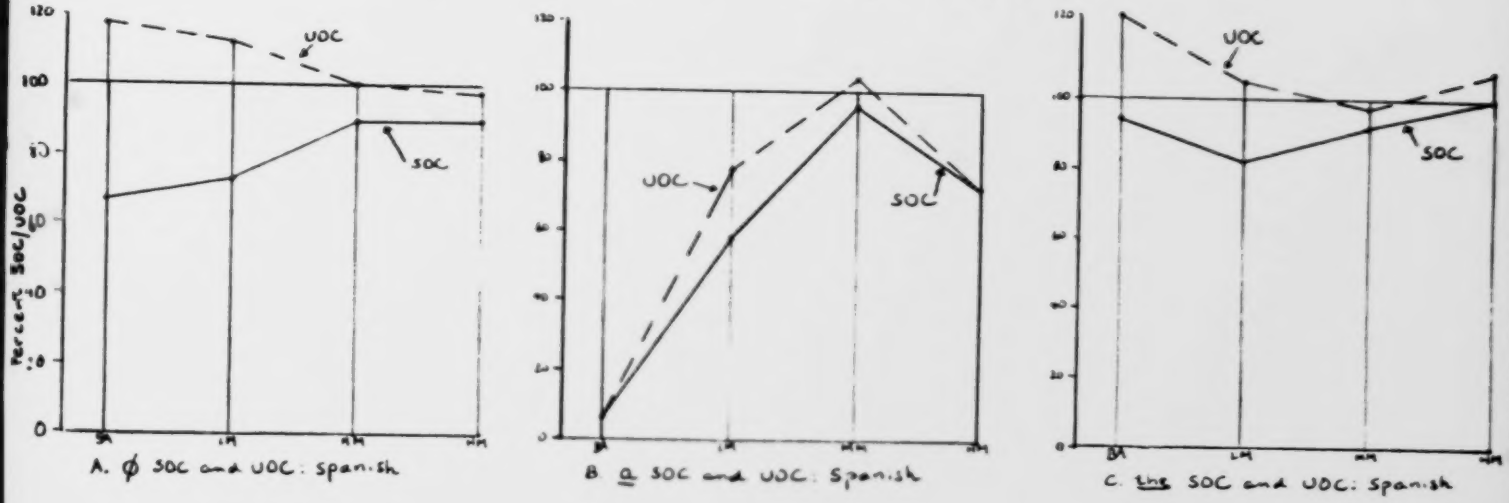

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Fig. 15. GERMAN Accuracy vs. Usage (UOC)

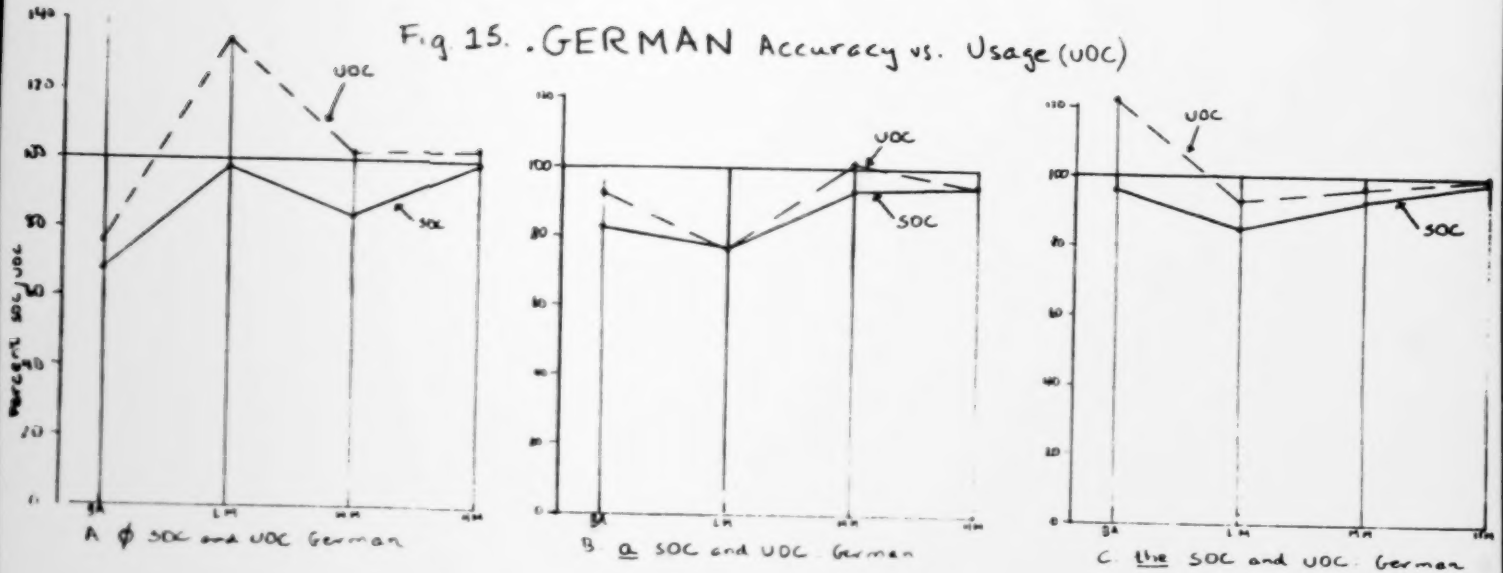

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Fig. 16. CHINESE Accuracy vs Usage (UOC)

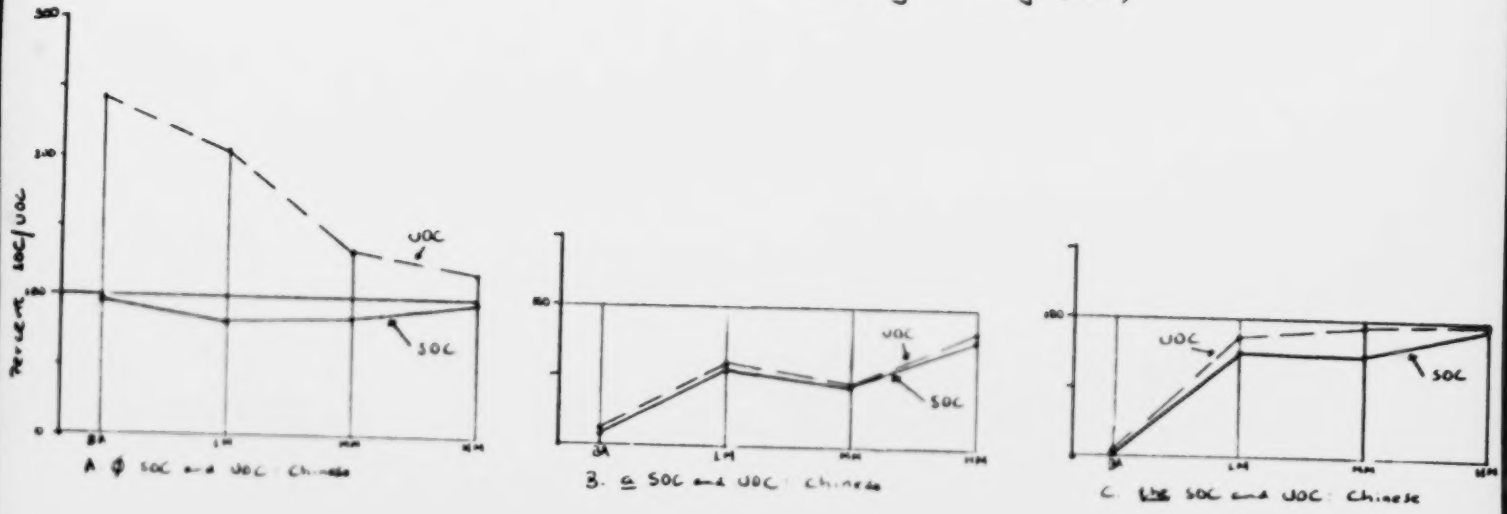

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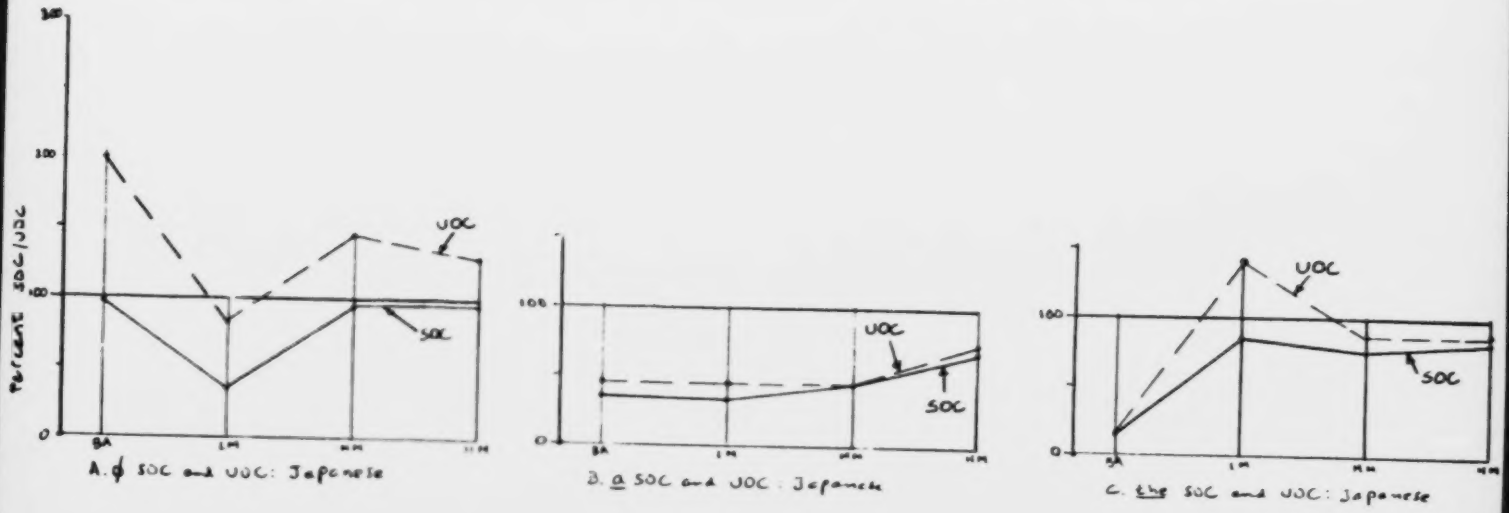
Fig 17. JAPANESE Accuracy vs. Usage (UOC)



A. ϕ SOC and UOC: Japanese

B. a SOC and UOC: Japanese

C. the SOC and UOC: Japanese

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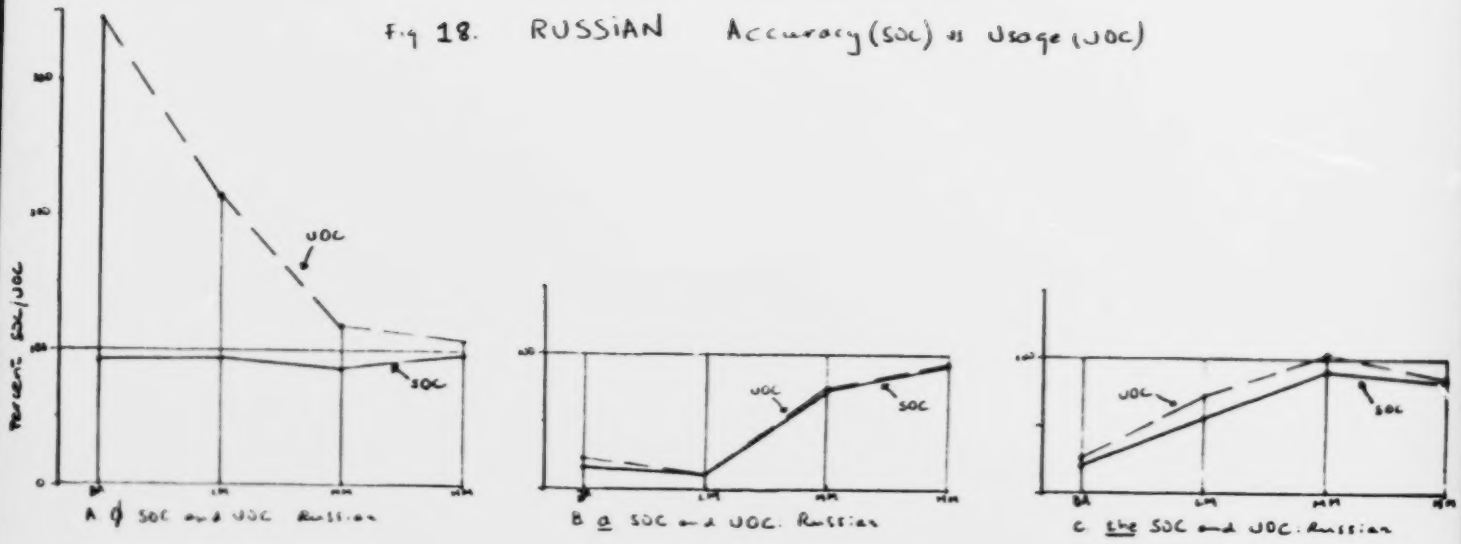
Fig 18. RUSSIAN Accuracy (SOC) vs Usage (UOC)



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